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NOVEMBER, 1878.

Certainly it is excellent discipline for an author to feel that he must say all that he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

A CASE OF LITHOTOMY.*

HISTORY OF AN UNSUCCESSFUL CASE OF LITHOTOMY, WITH
SOME COMMENTS ON THE CHARACTER AND DIAGNOSIS
OF DIFFERENT FORMS OF RENAL DISEASE, ASSO-
CIATED WITH STONE IN THE BLADDER.

BY N. P. DANDRIDGE, M. D.

July 19, 1878, I was asked by Dr. Foster to see Michael Casey, who presented symptoms of stone in the bladder. At the first visit an attempt was made to introduce a sound, but owing to the great sensibility of the bladder, and the pain it caused, the attempt was unsuccessful and was given up, until ether could be administered.

The following history was obtained: Age sixty five years; Irish; private policeman; is in the habit of drinking several pints of beer daily. Six years ago began to suffer with urinary trouble, and this has continued from time to time since then. About one year ago began to suffer with frequent

* Read before the Cincinnati Medical Society.

desire to void urine; this was always attended with more or less pain. The urine at times contained blood.

At present the face is puffy and pale, and presents the appearance of great suffering. The desire to pass water is intense, and recurs every few minutes. A few drops only are voided at a time, and great pain, especially at the end of the penis, is always experienced. At times prolapse of the mucous membrane of the rectum occurs, and causes great distress.

The day after the sounding the urine was examined, and found to contain a considerable quantity of blood, and a large quantity of pus corpuscles. It was ammoniacal, and deposited the triple phosphates, and a few oxalate of lime crystals. Albumen, to the extent of one-third the amount of urine, was present. The specific gravity was 1010.

The day following it was not deemed advisable to administer ether; so an attempt was made to better his present condition, and if possible allay to some extent the urgent and distressing symptoms caused by the cystitis, which the examination of the urine proved to be present. For this purpose tonics, anodynes, and the usual remedies employed against inflammation of the bladder were tried, but all without effect. All the symptoms became more aggravated; the frequency of micturition, and the pain caused by it, prevented all sleep. The urine continued loaded with pus and albumen—the quantity of the latter at each examination amounting to at least one-third. The clothes were constantly saturated with decomposed urine, so that our patient's condition was quite deplorable. Indeed such was the urgency of all the symptoms, that it was determined to administer ether and formally explore the bladder. This was done August 5th, after the patient had been under observation nearly four weeks, and a stone was felt at once. The ether was well borne.

Two grains of quinia were administered every four hours until August 9th, when the operation of lateral lithotomy was performed. Having made the usual incisions, and the knife having been passed into the bladder, the finger was

introduced, and immediately came in contact with an outgrowth from the prostate: this seemed to be the hypertrophied so-called "middle lobe," partially severed by the knife. The stone was felt behind this, and seemed to occupy the entire cavity of the bladder, and to be closely grasped by the walls. An effort was made to extract with the forceps, but the opening was found too small, and the original cut in the prostate was enlarged with a straight probe-pointed knife, and the attempt to extract renewed,—again without success. A powerful pair of crushing forceps was now introduced into the bladder, with the intention of reducing the stone to fragments. It was found impossible to fairly catch the calculus, and though some fragments were broken off, its diameters were not sensibly diminished. The probe-pointed knife was again introduced, and a cut was made almost through the right lobe of the prostate. The stone was then with difficulty drawn from the bladder. Just as it freed the bladder, the forceps slipped, and it was necessary to finish extracting it by means of a scoop inserted behind it, aided by a finger in the rectum. In the bite of the forceps with the stone three firm polypoid growths were drawn out; one of these measured one and a half inches in length. The stone measured five inches and three-eighths in its shortest circumference, and six inches and a quarter in the longest. The weight of the main stone was one thousand and sixty grains, and of the fragments broken off one hundred and forty-five grains—making a total of twelve hundred and five grains, or two ounces, four drams, and five grains. The stone was of a globular shape, flattened on one side, with a concave surface, and externally was composed of phosphates.

I should have mentioned the fact that when the opening in the bladder was first dilated by the introduction of the forceps, a large quantity of pus flowed out with the first gush of urine. The bladder was examined by the finger, and several fragments of the stone removed. It was then carefully washed out, and the patient put to bed. He was under ether altogether thirty-five minutes. But little blood was lost, and

the operation was well borne. Three hours after the operation he was found very restless, and suffering pain, with a desire to pass water. In making an effort to do so, a large clot was expelled from the cut in the perineum. His pulse was 140, and very feeble. One-third of a grain of morphia was ordered, with ice to wound if there was any bleeding. At 5 P. M. his pulse was 110, and he had had some sleep. At 8 P. M. pulse 96, and he expresses himself as feeling comfortable. The sheet under him was found wet with urine and changed.

August 10th, the morning after the operation, pulse 87; has slept well, and feels comfortable. To be kept under the influence of morphia, and ordered two grains of quinia every four hours.

Our patient continued to do well for several days. On the fourth day the bowels were moved with castor oil. On the sixth, it was noted that the wound did not present any evidence of repair; its surface had not cleaned off, and the edges were swollen and red. The day following he suffered with diarrhea, and his temperature ran up to $103\frac{1}{2}$, and pulse to 116. For several days his morning temperature was slightly above normal, and his pulse about 90. His appetite failed somewhat; there was some disposition to wander, and bed-sores began to threaten over the sacrum. He was kept on quinia and iron, and ordered to take stimulants, and as much nourishment as possible. The wound continued sluggish and showed no disposition to repair.

August 21st. For several nights has had one or more chills. On examining the wound, it was found infested with maggots. These were removed and the wound thoroughly washed out, and then sprinkled with pure salicylic acid. No more maggots appeared; the salicylic acid was kept up for several days. There was no improvement in his general condition.

August 27th. Some water passed from the penis, and continued to do so, but caused great pain, very similar to that experienced before the operation. Thinking that possibly a

small fragment had been left behind and become lodged in the urethra, a sound was finally introduced, and immediately on entering the bladder grated on a stone. This I supposed was a mere fragment left behind at the operation; the sequel shows I was mistaken. At this time it was noted that the wound remained without evidence of repair, and that its edges were dry and presented the appearance of bacon rind.

The next day, having brought my patient under ether, a lithotomy staff was introduced through the urethra as a guide, and then the finger was passed without difficulty through the wound in the perineum, and at once came in contact, to my great surprise, with a stone almost as large as the first. This was extracted with considerable difficulty, the outer fragments of the stone being broken off by the forceps. These fragments weighed three hundred grains, and the main stone six hundred and ninety grains; its shape was oval, and the outer layers were composed of the phosphates. In addition to the stone, several fleshy masses, in a state of sloughing, were drawn out. The bladder was carefully examined, both with the finger and sound, and well washed out. The mucous membrane was quite rough, and as far as the finger could reach numerous polypoid growths projected from every side into the cavity of the bladder. The surface of these growths at points seemed encrusted with phosphatic deposits.

The operation was well borne. No knife was used, the finger being passed without difficulty through the inclosed wound. After the forceps had been passed into the bladder and the first traction was made, some fecal matter was noticed with the urine which escaped. It was found the wall of the rectum had given way, about an inch and a half above the anus. This opening was at the point where the first stone had lodged after its escape from the bladder, and from where it had been necessary to dislodge it by passing a finger into the rectum so as to get behind it. The tissues about the original cut being in a sloughing condition, and much softened, gave way on the slightest pressure.

From this time the feces escaped from the perineal cut, and

our patient gradually lost ground. On several occasions small fragments of stone, and bits of gravel embedded in masses of mucus, were washed out of the cut. The pulse gradually rose to 120; the temperature, however, remained normal.

This condition remained without marked change for nearly three weeks, there being a gradual though not marked decline. Finally, complaining of inclination to make water, and pain in the penis constantly recurring, it was determined to once more explore the bladder, and to thoroughly wash it out. Ether was again given, and the bladder once more explored. A considerable quantity of sand embedded in mucus, together with masses of dead tissue lying free in the cavity, or still adherent to the mucous membrane, were felt. By means of the forceps some particles of sand were extracted, together with masses of sloughing tissue. Some of these masses were of considerable size, and evidently the remains of decomposing and detached polypi, while the rest were shreds and patches from the mucous membrane. The bladder was washed out with warm water, and after this the wound was daily washed with a weak solution of tinct. ferri chlor.

Death occurred on the 24th of September.

From the first to the last there was not the slightest evidence of repair in the wound. For some days preceding death there was evidence of uremic poisoning,—a condition of increasing drowsiness, and disposition to wander and mild delirium, from which, however, he could generally be roused to answer questions; and with a pulse reaching 120, while the temperature was normal. He died forty-five days after the first operation.

An autopsy was held some sixteen hours after death; the bladder and kidneys were alone examined. The peritoneum was entirely free from inflammation. The bladder was firmly contracted and empty, and the walls thickened. Externally the organ was not perfectly symmetrical; at the fundus to the left was a slight prominence, which proved to be a sacculated portion. On opening the bladder the original wound showed no evidence of repair, but was covered with white shreds of

sloughing tissue. The mucous membrane was of a dark slate color, and quite soft. To the left, at the fundus, was a shallow diverticulum or sack. In this portion of the bladder alone the mucous membrane appeared quite normal. Here were discovered several small openings, admitting only a probe at first, but easily dilated and leading into sacks large enough to hold a marble. Several other sacks in different parts of the bladder were found. About the neck and from the prostate were found the remains of the polypoid outgrowths, which were felt during the different operations. The greater portion of these outgrowths had sloughed off, leaving only the bases projecting some lines higher than the surrounding surface, and these were covered with dead tissue. These outgrowths were all below the line on which the ureters enter the bladder. The right ureter was somewhat dilated, and contained a small stone.

The kidneys were embedded in fat, which was so firmly adherent to the capsule proper, that it was stripped off before the organ could be exposed. The surface was somewhat rough; it was of a light mottled yellow color. The section was of light color, anemic and quite fatty. The pelves were somewhat dilated, more especially the calyces, and the mucous membrane was deeply injected. The papillæ were flattened, and at some points covered with a diphtheritic membrane. In both kidneys some small stones and gravel were found. In the left kidney an abscess presented on the surface.

The most apparent fact which presents itself, in considering the above case, is the oversight committed in not discovering the existence of the second stone at the time of the first operation, and removing it at once. It may, therefore, be of interest to consider the conditions which render the discovery of a stone more or less difficult. The usual position for a stone to occupy is at the base of the bladder; and here it is usually discovered without difficulty in a normal bladder, either in examining *per urethram* or through a lithotomy cut in the perineum. The stone may be displaced and found

encysted. In this case, Coulson says, "the entrance to the sack may be narrow, or its orifice may be wide and a portion project into the bladder." Coulson figures, in his work "*On Diseases of the Bladder*," a bladder with three cysts in the posterior wall, and each of these occupied by a calculus. In another case, a single stone is encysted in the same part of the organ.

Sir Benjamin Brodie recounts a case where a stone was adherent behind the pubes, and was discovered with difficulty, and was then removed by tearing it away.

Erichsen gives the details of a case where, having removed a small calculus from a boy's bladder, his finger struck on some hard mass behind the prostate. Tearing away a membranous covering, a stone, which had been completely covered in, was discovered.

Growths projecting into the cavity of the bladder may render thorough exploration difficult. Tumors of the bladder, says Bryant, may be "wart, fibrous, villous, epithelial, or cancerous." And here may also be mentioned the hypertrophy of the prostate, especially the middle portion. In his *Surgery*, he gives the drawing of a case where the anterior and lower walls of the bladder are everywhere covered with polypoid growths.

In considering the case which has been presented, the stone I believe must have been held in the sacculated portion of the bladder at the fundus, and here was quite out of reach of the finger. This sacculated portion appears in the specimen quite shallow, and not likely to hold a stone; but it must be considered this condition is found after the bladder is quite empty and contracted, and had not been distended for weeks. During distension, this sacculated portion must have been a much deeper pouch than is now seen. The existence of the outgrowths from the base of the bladder, filling more or less completely the cavity of the organ, must have prevented the second stone from descending after the abstraction of the first. That the stone was fixed, is rendered probable from the fact that it was not for two weeks after the first operation

that our patient began again to experience any pain. At that time, I suppose, the second stone having worked itself loose, fell against the neck, which is the sensitive part of the bladder. The exploration at the first operation was made by the finger alone, and this I believe was the cause of the failure to strike the second stone. Since then, making experiments upon the dead body, I find that the finger, introduced through a perineal cut, does not penetrate more than an inch to an inch and a half beyond the prostate in an adult, and that an instrument can be passed nearly four inches beyond before reaching the fundus. This shows at once how much of the bladder may remain unexplored if the finger alone is used.

Reviewing now the history of the case, and considering the conditions revealed by the post mortem, we must admit that a careful exploration of the bladder by an instrument of sufficient length must have revealed the existence of the second stone, and saved our patient three weeks of useless drain upon his powers. I have presented this case, hoping that it may prove a beacon-light, warning others of the dangers from unseen and undiscovered rocks. The case suggests, however, a much more important subject than merely the oversight committed during the operation, and that is an inquiry into the causes of lack of success in lithotomy in general.

Crosse has investigated the influence the weight of the stone has upon the mortality. In calculi weighing under one ounce, the mortality was 1 in 11.28. In calculi weighing two to three ounces, mortality was 1 in 2.18. Each of the calculi in my case would fall under this category; combined their weight would be between four and five ounces, and in such cases the average mortality is 1 in 1.66, or about two in three die. The weight of the stone does not bear a direct proportion to the size,—the specific gravity depending upon the composition, and varying greatly. Coulson says that stones of more than one and a half inches in diameter are always liable to cause more or less trouble in their removal; while a diameter of two inches and a circumference of six, is "the largest size which can be removed by the ordinary lateral operation without disorganizing the parts." Age has a marked

influence on the result, and the percentage of fatal cases increases from infancy to extreme old age.

In this connection I may mention, as simply a matter of interest, that a recent monograph from Calcutta gives the analysis of one of the most successful series of cases of lateral lithotomy ever published; in fact, with one or two exceptions, it is the most remarkable. The monograph is written by Rai Ram Narain Dass Bahadoor, a native of India, who records his own experience,—two hundred and forty-eight cases with seventeen deaths, or one in fourteen and a half.

In the Medico-Chirurgical Society's Transactions, for 1862, Bryant has published a table containing all the cases of stone operated on at Guy's Hospital during the preceding twenty-five years. The entire number was two hundred and thirty; of these thirty-three proved fatal. Of the thirty-three fatal cases nineteen were submitted to autopsy; and of these every case presented evidence of renal disease, except two—one a child two years old, who died of acute bronchitis, and another of six, of pelvic cellulitis.

In commenting on this table, Bryant says:—"In seventeen of the nineteen cases, it must be observed that disease of the kidney in different degrees of severity existed, and that this disease was of no doubtful character, suppuration and degeneration being present in nearly all. In nine of these cases, peritonitis and pelvic cellulitis were also present. In two, pyemia was an associated cause. In one, extreme inflammation of the urinary passages; and in five instances, renal disease was sufficient to destroy. . . . The only two cases in which renal disease did not exist were, a child two years old, who died of acute bronchitis; and one six, who died of pelvic cellulitis, which was the result of an accident." The character of this accident was not given.

A consideration of the ages of these patients makes the influence of the renal disease more marked and apparent; they range from nine to seventy years. Five of them were under twenty; four between twenty and forty-five; and eight between that age and seventy.

The remaining fatal cases, fourteen in number, were not submitted to post mortem examination. The assigned causes of death were as follows:—"Three died from hemorrhage, four from peritonitis and pelvic cellulitis, and five are said to have sunk after the operation. In one case death was attributed to acute cystitis, and in another to pyemia after the wound had healed."

In this last list the assigned causes of death bear a striking resemblance to those found in the former table, when the existence of renal disease was proved by autopsy; so that it is fair to assume that a like condition would have been revealed if an examination had been obtained.

Bryant continues from the above:—"It appears to be clearly shown that in seventeen instances out of the nineteen, in which any definite information was obtained concerning the causes of death, the fatal result might in all fairness be ascribed to diseased kidneys, with or without any other complications. This visceral disease has been shown to have existed in the young and in the old, and eliminating accidents it appears to be the chief cause of death. . . . The fact that peritonitis and pelvic cellulitis were present in a large proportion of the cases examined need be no argument against this view, for physicians and surgeons are all well aware of the intimate connection which exists between renal disease and inflammation of the serous membranes. In medical practice this form of inflammation is, as a rule, the immediate cause of death in most examples of Bright's disease. It does not, therefore, appear irrational to doubt whether so many patients, either young or old, would sink with peritonitis and pelvic cellulitis after the operation of lithotomy, if they had not been rendered prone to such inflammation by the presence of the renal affection."

This table of Bryant, although it comprises a comparatively small number of cases as compared to others, has the advantage of giving the exact cause of death in each unsuccessful case, and is the only one of any extent that I know of which goes into this detail. Nearly all the writers on this subject

speak in general terms of the influence of renal disease upon the result, but very few give any systematic information upon the subject, and are generally entirely silent upon the subject of diagnosis. Erichsen disposes of it, by saying that if the amount of albumen deposited after the usual test does not exceed one-tenth the entire amount of urine, the disease of the kidney will probably have no bad effect upon the operation. If, however, the amount should reach one-sixth, a bad result is to be expected; adding, however, that he has seen cases recover even under these conditions.

The importance of the subject leads me to consider somewhat more minutely the kind of renal disease complicating cases of stone, and the diagnosis of the various conditions.

In the *London Lancet*, June, 1873, will be found a lecture by Sir Henry Thompson, "On the influence of renal disease on the choice of operation for stone in the bladder." He describes the conditions included under renal disease, as, first, those known as Bright's disease, especially the "granular contracted kidney," and the "large smooth white kidney." Secondly, "another kind of change, which is wholly distinct from the foregoing, occurs in kidneys which have been frequently, or for a considerable time, the seat of calculus. The presence of minute foreign bodies, for the most part aggregations of uric acid crystal in the uriniferous tubes, at their orifices and around them, in the calyces, is the cause of injury to the structure affected, in a degree corresponding to the duration and magnitude of the deposited matter." The third class includes cases of saccharine diabetes. And the last those "resulting from diseases which habitually obstruct the outflow of urine. This affection also is not uncommon, and has also an intimate relation to our subject."

Simple dilatation or hydronephrosis rarely if ever exists as a result of calculus in the bladder. The dilatation is always associated with more or less pyelitis, and thus associated the kidney may be reduced to the condition of a mere sack.

Under the head of *Pyelitis* and *Pyelonephritis*, Ebstein, in Ziemssen's *Encyclopedia*, Vol. XV, discusses the subject of

inflammation of the pelvis, with and without extension of the inflammatory action to the body of the kidney itself. Pyelitis may depend upon various causes; for our purpose, however, we may confine our attention to "those forms which arise where from any cause decomposition of the urine takes place." In the cystitis caused by stone, decomposition of the urine is almost constant. This "leads to the deposition of the ammonio-magnesian phosphates, and the urine is constantly alkaline and swarming with bacteria. Recently a role of great importance has been attributed to these bacteria, in the production of pyelonephritis and pyelitis." The vesical trouble always exists first. "In these cases the inflammation is rarely limited to the pelvis, but extends to the kidney itself." In the earliest stages there is hyperemia and increased secretion of pus and mucus in the pelvis. The body of the kidney at first is somewhat enlarged, its surface red, with here and there pale spots, which can be traced through the cortical into the pyramidal portion. Later numerous small abscesses will be found, which coalescing form larger ones, until finally the kidney presents the appearance of a sack separated into sections by more or less perfect septa, and filled with pus. "With high powers of the microscope the uriniferous tubes are found filled with small shining granules; these granules are brilliant, highly refractive, and are not affected by the addition of acids, alcohol, alkalies, or ether." These granules are bacteria, and according to Klebs, they "excite the inflammation, causing a purulent pyelitis, and subsequently circumscribed renal inflammations." Renal calculi may also play an important part in the production of inflammation of both kidney and pelvis.

In view of the important influence which advanced disease of the kidneys exercises on the mortality of lithotomy, it is worth our while to consider how far we can detect its existence during life, and how far we can discriminate between the various conditions above named. "The diagnosis of pyelitis," says Ebstein, "can be made with certainty when we find the characteristic cells of the renal pelvis in purulent urine." These he describes as "flattened, laminated, caudate cells."

Neither the acid secretion of the urine, or the lumbar pains, are diagnostic. The specific gravity may be normal. Unfortunately these characteristic forms are rapidly destroyed in ammoniacal urine, and are therefore not available in the class of cases we are considering. Ebstein, however, continues:—"Two groups of symptoms will furnish the clue to the diagnosis, namely, the fever and nervous symptoms. When in connection with such an affection, chills and continued fever, with prostration of strength and a status typhosus set in, or when vomiting occurs, with a dry crusted tongue, accompanied by profuse sweats, hebetude, unconsciousness and delirium, the diagnosis of a so-called pyelonephrosis parasitica may be made."

From this description it is quite apparent that seldom, if ever, could a positive diagnosis of the existence and character of this renal disease be made in any given case of stone.

In regard to cases of dilatation of the urinary passages and organs behind some mechanical obstruction, Sir Henry Thompson, in the lecture above alluded to, states positively that an absolute diagnosis can not be made. All physical exploration is useless, and the presence or absence of pain on palpation is negative. "You may rely on it," he says, "that no method for arriving at anything like a certain diagnosis of pyelitis, with mechanical distension, is at present known." From such a source this statement must be considered authoritative.

Finally, in regard to the existence of Bright's disease, most frequently in the form of granular kidney, more certainty can be arrived at. The existence of tube-casts in the urine would be diagnostic in itself, and this occasionally happens; usually, however, there is no trace of them to be found, as they are destroyed by the ammoniacal urine. The existence of a quantity of albumen so great that it could not be accounted for by the presence of pus and blood, is a fact of much importance; and when this is joined to a urine of light specific gravity, the diagnosis may be made with confidence of the existence of granular kidney. Diabetes, of course, would be manifested by the presence of sugar.

From the above quotations, it is quite apparent that the question of diagnosis is a difficult one, and that the exact condition of the kidney is often impossible to make out.

Let us apply the result of the above discussion to the especial case just reported. Evidence of advanced renal disease existed, as manifested by the large quantity of albumen and light specific gravity of the urine. The patient was advanced in age, the symptoms were of long standing, and marked cystitis was present. All of these conditions combined to render the case unfavorable for operation, which was only justifiable as a last resort. The case was under observation for four weeks, and every means employed to mitigate the suffering and to ameliorate the symptoms; and if any success had met these efforts, further attempts at relief could not have been justified. All our efforts were without result, and the condition of the old man became daily worse, and more and more pitiable; so that it became apparent that his suffering would soon wear him out unless relieved. Under these circumstances the operation was undertaken. He lived for six weeks in comparative comfort, most of the time free from all the harassing pain he had before suffered. His death I do not believe was at all hastened by the operation. The fatal result was dependent on the advanced renal disease present, and which accounts for the entire absence of repair in the wound.

While I do not presume to escape from the responsibility involved in the blunder which left the second stone for three weeks in the bladder, I do not think the fatal result can fairly be attributed to it. The fecal fistula which followed the extraction of the second stone, can not fairly be charged to the operation. The general sloughing condition of the surface of the wound had so softened the tissues, that they gave way on the slightest pressure.

NOTE.—When the paper was read, the calculi, together with the bladder and kidneys of the above case, were presented to the Society.

CINCINNATI, O.

TRUE AND FALSE EXPERTS.*

BY J. W. GORDON, M. D., LL. D.

It is to be regretted that there should still be any controversy in regard to the question, "Who is an expert?" But such controversy is nevertheless still rife, even among learned doctors who undertake to instruct us on the subject. Those who have been connected with institutions for the treatment of the insane, are held by some to be the only competent and reliable experts in questions of the soundness or unsoundness of the mind; while others maintain that all educated physicians are justly entitled to speak as experts on such questions. The former insist that something more than a knowledge of medical science, as acquired from books and lectures, is requisite to constitute an expert in any department of that science. They contend that there must be such knowledge plus experience in its application to the particular forms of disease, involved in the case concerning which they are called to testify, before they are competent to testify at all. On the other hand it is maintained that every doctor of medicine may fairly be offered, and is entitled to be heard, as a witness, on any branch of his science. The law, at least in its living oracles, the judges, is sometimes puzzled with the question which is the bone of this controversy. Neither side is without reason; and it is not improbable that the final decision will follow a middle course, so as to admit both classes of doctors as experts; but to leave the court or jury free to say, whether the man of large practical experience in his profession, or in any particular branch of it, is not entitled to more weight as an expert, upon a question embraced in the scope of his observation and experience, than one who, without observation or experience, speaks from his knowledge of principles and doctrines as derived from books and lectures alone. The question is one of real difficulty, some courts ruling one way, and

*Continued from page 206.

some the other. It is not a week since a learned court of Indiana, held a regular physician incompetent to testify touching the sanity or insanity of a defendant in a criminal case, because he had enjoyed no special opportunities to observe and treat the insane; and, in 1870, in a very distinguished case, a like ruling excluded five learned doctors from the witness stand. Other tribunals of at least equal learning and judicial rank, admit the testimony of all doctors on questions embraced in the scope of the science.

Dr. Ray, in his treatise, "Medical Jurisprudence of Insanity," argues one side of the question with his usual force and ability. He says:—"It is not enough that the standing of the medical witness is deservedly high in his profession, unless it is founded on extraordinary knowledge and skill relative to the particular disease, insanity. Lunatic asylums and retreats for the insane, have so multiplied in our country, that patients of this class are almost entirely taken away from the management of the private physician, and consigned to the more skillful conductors of these institutions; so that many a medical man may spend a life of full practice, without having been intrusted with the care of a dozen insane persons. To such, therefore, a practical knowledge of the disease is out of the question; and thus, the principal inducement is wanting to become acquainted with the labors of those who have enjoyed better opportunities. If a particular class of men only are thought capable of managing the treatment of the insane, it would seem to follow, as a matter of course, *that such only are capable of giving opinions in judicial proceedings relative to insanity.*" And, with much more in the same vein, the learned doctor goes on to show how such a man of learning and experience may be sworn down by "others utterly destitute of any knowledge of the subject on which they tender their opinions with arrogant confidence." And he insists that, "instead of the unqualified and irresponsible witnesses now too often brought forward to enlighten the minds of jurymen on medical subjects, it would be far better if we had a class of men more or less like that of the *experts* of the

French, particularly fitted for the duty by a course of studies expressly directed to this end." This argument is resumed in other parts of his work, and has been ably supported by other men of equal ability; and, it must be confessed, that it seems to be unanswerable, where the law contains any provision enabling the courts to decide between men of the same profession, that one *has*, and the other *lacks*, the requisite knowledge and experience to constitute him an expert. It is plain, however, that if only those physicians who are intrusted with the supervision and treatment of the insane, should be allowed as experts in questions of sanity and insanity, the same question would still meet us further on. The inquiry would be limited, to be sure, to a less number of persons, but, as between doctors just introduced to the specialty, and those who have spent many years in it, the argument that excludes the general profession from the witness stand, would be as strong to exclude him who has just taken his place as physician to a house for the treatment of the insane. The question of exclusion would thus fall between those devoted to the specialty; and it is plain that its just application would finally exclude all but the most competent. But even when this end was reached, the jury would still have the right and be charged with the duty of considering the weight and credit to which the opinion of this highest expert might be entitled, and of giving it just such force as a factor of their verdict, as in conscience they might deem it entitled to possess. So, at last, the question would rest essentially where it now does, when every physician may take the witness stand as an expert, in every department of his profession. It must remain, at least until legislation shall interpose to change it, a question, as between doctors, not of their admissibility, but of their credibility, as witnesses. Of course, the right of any doctor to say, when called, whether he regards himself as an expert in respect to any question involved in a judicial inquiry, will always be respected. If he does so regard himself, he will be held legally competent, and allowed to testify. If he does not, his own opinion will exclude him from the

rank of expert in the particular case. There is, it would seem, no means, therefore, of excluding incompetent men in the medical profession, from the rank of expert witnesses, but by suitable and effective legislation, which, it is conceived, may materially aid in the attainment of the object, in two ways, namely:

1. By exacting of every person who may desire to become a doctor of medicine, a fair moral character; and satisfactory evidence that he has consummated a thorough course of study in his profession, and possesses an adequate knowledge of the principles and doctrines of the sciences that unite in medicine. This object can be attained by legislation; and sooner or later will be, if our people do not lapse into barbarism.

2. With or without legislation requiring a more thorough education and a higher grade of character for admission into the medical profession, the law may specially provide for the selection among the most competent, of a class of experts, who, as Dr. Ray suggests, shall be "peculiarly fitted for the duty by a course of studies directed to this end;" and by the rejection of others not so fitted for the high and solemn duty. Such a selection of competent, and rejection of incompetent men, is clearly within the scope of legislation; and ought to be provided for at the earliest practicable moment. Medical jurisprudence and the general administration of justice, as far as dependent thereon, would gain much from adequate legislation directed to both the foregoing objects. Of course any legislation to be adequate upon the first, would have to be supported by appropriate penalties against its violators.

There can be no doubt that both learning and experience are essential to the true expert. It is the application in practice of scientific doctrines and principles that alone can give certainty and confidence in professional opinions. They are both implied in the term expert; and yet, as already seen, they are so variant in extent and degree, that, until the law shall interpose and provide agencies for the selection of some, and the rejection of others as experts, all must be admitted;

and the credit and weight of their opinions be left to the court or jury to which they may be submitted as evidence.

But when it is settled who shall be received as an expert, and who shall not be so received, another question of great importance confronts us. What mode shall we pursue to elicit the opinion of the expert upon the special question under consideration? Different law-givers have adopted different methods of examining their experts. In no country in continental Europe, so far as we are advised, is the same mode pursued as under the common law in England and America; and while it is certain that for some purposes and in many respects, some of these systems are better than ours, the difficulty of determining just how far the adoption of any of their provisions would require our entire system of procedure to be modified; and whether the requisite changes might not even require us to go deeper, and modify the substantive provisions of the law themselves, has made our legislation slow, and probably will still continue to make it slow, to adopt them. Still it does seem that some changes ought to be introduced in the interest of truth and justice, whose hand-maid truth is. The general scope of all the facts on which the opinion of the expert is to be formed, ought to be agreed upon by the parties before the day fixed for the trial in which that opinion is to be given to the triers; and submitted to the expert for his consideration and judgment. If, as is generally the case, the parties could not agree upon the special facts of the case, and so frame a common hypothetical case, for the expert's opinion, they should be required to frame their respective hypothetical cases, and submit them to each other and to the experts a sufficient time before the trial to allow a careful analysis and thorough study of them, so that the expert might be able to form his judgment upon careful deliberation touching their significance of health or disease; and if of disease, of the kind and degree thereof. And as the opposing parties would have the same opportunity to study both hypotheses as would thus be accorded to the expert,

their examinations would be conducted with intelligence; and so, on the one hand, tend to elucidate and give point to the general opinion of the expert, if it were well-founded; or to correct, impair or destroy it, if, on the other, it were erroneous, imperfect or false. It is difficult to perceive how such a requirement could injure any party in his substantial rights, while it seems perfectly clear that it would promote every just cause, that depends on truth for its success. It would give the expert a fair chance, which, as such examinations are now generally conducted, is denied him. There are many questions constantly rising in the course of every lawyer's business, which the oldest and ablest lawyer will not undertake to answer until he has carefully examined the authorities relating to them, and taken ample time to consider and determine from all the lights he can bring to bear upon them, what may be the law. Yet our legislation, and our courts under it, assume that the physician and surgeon are competent to answer upon the spur, what may be the pathological significance of a long, crude, complex, and often contradictory and imperfect hypothesis, embracing a man's history, and that of several generations of his ancestors. The assumption is as unfair to the administration of justice, as to the doctor; and an outrage upon both. But, as the law now stands, there is only one power in the state capable of correcting it, and that is the will of the doctor himself, who may say, and truly, that he is not able to give an opinion upon it, without time to consider it. This ought to be done, until the legislation of the state corrects the stereotyped blunder of society, by which it is made necessary for the protection of scientific truth, and of the doctor who is called as its organ.

But, while insisting thus, upon the necessity of having the case, on which the expert's opinion is to be taken, framed into an hypothesis and submitted to him before he is required to appear in court and testify concerning it, there are not wanting learned doctors of medicine who regard such a statement of the case itself as an obstacle in the way of our reaching the truth. Thus, Dr. Grissom tells us:—"It is a familiar

fact that the usual course of introduction of expert testimony in the courts, so far as insanity is concerned, is for the purpose of sustaining the position of counsel for the prosecution, or the defense, with the strange anomaly of a witness announcing the conclusions of a most recondite science, and straightway being cross-examined concerning the same, as though to demonstrate his ignorance or untruth, by a layman, presumed to be a stranger to the very science, of which the expert is supposed to have special knowledge." He, therefore, declares that, "we should demand the enactment of statutes remanding to a commission of experts the examination of the accused, that the plea of lunacy may be disposed of, when presented, before issue is joined or trial begun. Compensation for this service should be made by the state only. And it may well be claimed that the observation of the commission should extend through such a period of residence in an insane hospital as will supply ample data for exact conclusions. To this might be easily added, the visits and observations of a physician especially sent by the defense to coöperate with the commission." And he concludes that until legislation authorizing such a course can be had, "we should labor to place the expert in the position of *amicus curie*." And while he seems, unfortunately, not to comprehend the relation which the expert sustains to the case in which he is called to testify, he does not hesitate to condemn a learned judge who, in strict accordance with law, "refused to allow a medical gentleman, present in court, who had heard all the evidence, to testify to his opinion of the soundness of mind of the accused." Of course he means, so to testify, upon the evidence which he had heard. After much more of the same sort and drift, he concludes that "the natural responsibility of the position of a medical expert, is *heightened* by the imperfect systems existing whereby the physician is often hurriedly called to give an opinion based on miscellaneous facts, gathered by laymen, with slight opportunity for observation of the accused, with the forlorn hope that he may confirm or confute the plea, offered at the last moment, or

during the very progress of the trial for the first time. Surely this procedure is unworthy of that degree of civilization which our country has reached." And he adds to all this a lamentation that medical men have come to be regarded "as governed by false sentiment, or imaginative fancies, at war with the best interests of society;" and then, as if to show his lamentation groundless, concludes by proving that there are medical men, and eminent ones too, who, following neither "false sentiment," nor "imaginative fancies," have, nevertheless, for mere sordid gain, set themselves "at war with the best interests of society"—even with truth and justice. This terrible charge should have been considered, and perhaps resented here, had not the most distinguished name at which it was aimed, seen proper to retort it in "An Open Letter" of more than a dozen octavo pages, without attempting to disprove it; and had not his ablest defender excused the accused, on the ground that, "society is largely responsible for all this sort of thing"—that is, false expert testimony for hire and pay; and added: "Our system of judicature tolerating corrupt litigation"—he resides in Texas—"the demand, human nature remaining what it is, will always find a supply." (See *Journal of Insanity*, July, 1878, page 164.) Such answers to such a charge from such quarters, may fairly excuse others.

Dr. Grissom's essay was not referred to, however, with any intent or desire to be carried by it into the unhappy controversy of the current year; but only to show his hostility to our present methods of hearing what expert witnesses may know in relation to any given case. He seems to think that the expert should hear the witnesses testify to the pedigree, history, conduct and symptoms of a person who claims a right, or makes a defense, on the ground that he has been insane at some previous time; and, from what he thus hears, assuming the truth of so much of it as may have won belief in his mind, pronounce his opinion touching the sanity or insanity of such person. It would be useless to give the many manifest objections which exist to such a course. It is enough to say that it leads to confusion by confounding the

function of the expert with that of the jury, or court trying the case. It places the expert, too, in a condition to elude and defy cross-examination; for it gives us only the tangled and contradictory mass of testimony which has been delivered by all classes of witnesses, as the foundation of his opinion. The very ruling that Dr. Grissom quotes only to disparage and condemn, evinces the wisdom of the law in the prevention of such a system. It will be long before the law will abandon for it, the method of taking "particular facts and, assuming them to be true, to ask whether they indicate insanity," or not. In other words, the hypothesis will survive the method of allowing the expert to hear the testimony at large, and testify upon his judgment of what it proves.

As little will the principles of the common law allow of the substitution of a commission of experts to settle the fact of sanity or insanity, before the trial of the question of guilt or innocence; and these principles are embodied in the constitution of most of our states, and of the societies which created the states. Such a commission would be dangerous to the rights of the citizen, whom it would deprive of trial by jury; and whose trial it would postpone at the pleasure of the commission, and perhaps forever; for it might be that "ample data for exact conclusions," might never be supplied by any "period of residence in an insane hospital." And when it is remembered that the proposed commission is to be in the pay of the state, the party having an interest adverse to that of the prisoner, it would effectually dispose of all the provisions of the Bill of Rights interposed by the people to protect the citizen accused of crime against the government. Such reflections might be pursued and multiplied continually; for they oppose themselves in every direction to the adoption of such a scheme. It is not likely, therefore, to be soon adopted; and may be safely left here, to await the exigencies of the future.

It remains only to submit a few considerations upon the hypothetical case, now in general use, as a means of eliciting expert testimony where such testimony may be admissible.

In every trial, each party may claim that, upon the true state of the case, he is entitled to the verdict of the jury. Of course, in every such controversy, there are many facts common to both sides; but each asserts some, which the other denies. If these common and particular facts are framed into hypotheses on each side, the difference in the facts of the two cases will often be so great that the answer of the expert upon each will be favorable to the party presenting it. In such case, the controversy before the court or jury will not involve the expert's opinion; but will spend itself upon the question, which of the hypotheses presents the true case in evidence? Whenever that is ascertained, the expert's opinion becomes decisive of the result of the trial. In such a state of evidence, the expert's opinion is the analogue of the charge of the court, which always instructs the jury to the effect that, if the facts shall be found to be as claimed by the plaintiff, their verdict must be for him; but if, as contended by the defendant, then their verdict must be for him. The expert, in the same way, founds his opinion always, upon the truth of the facts presented in the respective hypotheses. The parties suspend their success or failure, on the truth or falsehood of these facts. If the jury find a single fact against the party making the hypothesis, and the expert has not declared that fact to be unimportant to his conclusion, then that will be sufficient to render worthless in the trial the expert's opinion. The jury should in every such case wholly disregard the opinion, not because it is not a sound opinion upon the facts stated, but because the facts do not constitute the case on trial. And this shows the advantage that is derived in such investigations, from the use of these hypotheses. After they have been stated, and the expert's opinion given upon them all, it is proper practice to ask him to state whether at all; and, if at all, how far any one fact enters into his opinion and judgment upon the whole. In this way, a party may relieve himself from the necessity of proving immaterial matters; or his adversary may fix the necessity of proving every fact assumed, upon him, by showing that it is material. It is equally

proper for the party adverse to any hypothesis, to show, by cross-examining the expert, the immateriality of the several facts composing it; and so to shake the judgment of the expert upon the whole.

It frequently happens, however, that experienced and wise experts conscientiously disagree in regard to the significance of the same hypothesis; and it is in such cases only that cross-examination should be employed to weaken the adverse opinion, by showing every point in which it may be found contrary to, or unsupported by authority, experience or reason. In all such cases of conflict, the question between the doctors must be left for decision to the judge or jury. Nor should it be matter of complaint in such cases, or in any, that the cross-examination of the expert touching his opinion and the grounds of it, is made, "as though to demonstrate his ignorance or untruth, by a layman, presumed to be a stranger to the very science of which the expert is supposed to have special knowledge." The intelligent and candid man of science, if true to himself and truth, runs no risk of being involved in the ignominy of ignorance or falsehood by the examination of an ignorant layman, or any other; for every question must be intelligible or unintelligible. If the latter, the doctor can say so; and that is the end of it. If the former, then it involves an opinion pertinent to the issue, or foreign to it. If the latter, it is disposed of when its irrelevancy is pointed out. If the former, then the doctor either knows the response his science authorizes, or he does not. In the latter case, let him confess his ignorance with simple candor. It is his only way as a true man. If the former, let him answer with equal candor, as his science warrants. The truth is, there is too much reason to believe that the cross-examination is decried, not because it is conducted by an ignorant layman; but because it exposes an ignorant and pretentious expert. Nor is it true that the educated lawyer should be regarded as "a layman presumed to be a stranger to the very science of which the expert is supposed to have special knowledge." The science of medical jurisprudence is

common ground to both professions; and it would be a shame to both, to say that, the many learned books on the subject, have left the legal profession so ignorant that its members do not know how fairly to examine and cross-examine a medical expert.

In conclusion, we have seen that knowledge is the basis of all valuable testimony; and that expert testimony touching changes in the natural and normal condition of places or persons, is not practicable until the expert knows what that natural and normal condition was. Out of this fact arises the necessity of a State Board of Health, supported by the entire medical profession. The necessity for thoroughness in all medical and medico-legal investigations has been here insisted on, and the consequences of a want of it illustrated by sinister examples. And, finally, it has been shown, that fair-play demands that our code of procedure be so modified as to place the medical expert in possession of the hypothesis on which he is to give his opinion, a sufficient time before he is called to testify, so that he may study it thoroughly, and come upon the witness stand prepared for his duty there. And here it may be added, that the court should possess the power to make experts such reasonable allowance for their labor in preparing and delivering their testimony, as upon the testimony of their professional brethren may appear to be just; and that this allowance should be taxed as part of the costs, and paid by the losing party. This would place the expert on the same footing as other witnesses, in respect to his compensation. He would cease to be the stipendiary of either party. The state, like other parties, would, of course, be primarily liable for the fees of experts called on its own behalf.

A CLINICAL LECTURE ON STRICTURE OF THE
URETHRA.

BY CHAS. C. F. GAY, M. D.

Surgeon to the Buffalo General Hospital.

Gentlemen: In these latter days—so replete with the spirit of advancement in surgical science and device, by virtue of which the physical ills, to which human flesh is heir, are mitigated—we find the field of labor not what it was in the early days of the fathers. The old-fashioned or general practitioner is obliged to stand aside in order to make room for the new-fashioned practitioner or specialist. The human body has been mapped out into well defined regions; some of which are subdivided into other regions, and each becomes the subject of special study. Thus we have eye and ear surgeons, orthopedic and gynecological surgeons, and surgeons for the genito-urinary organs, etc. The general practitioner retires from one region after another, until there is no place for him to stand, unless it be upon his dignity or reputation, which he may have acquired by long and arduous service and devotion to duty. Room must be made for the specialist, who, armed with superior knowledge and sharper instruments, comes in to possess and occupy his chosen special field of study and labor.

This is all very well in itself considered; I find no special fault with this arrangement, provided the specialist will stick to his specialty. Division of labor is advisable and wise; by it we are able to attain unto greater proficiency in our art. He who devotes all his time and talents to some special branch, either of medicine or surgery—provided he be well grounded in knowledge as a general practitioner—ought certainly to become more proficient than he who attempts to learn and know all things pertaining to the profession, since the probabilities are that he who attempts too much may, perchance, find himself unfitted to do any one thing well.

The field of medicine and surgery is too broad, and the work too great, for the capabilities of all men. One man may be capable, dextrous and expert in the performance of one duty, and sadly deficient in his capabilities to perform another duty. It, therefore, betokens good for one to engage in special studies, since the greater proficiency in any single branch of study, the greater will be the honor accredited to him who engages in practice, and benefit to him who is practiced upon.

The old-fashioned surgeon must, however, still be recognized and respected wherever merit is not held at a discount.

The surgery of the genito-urinary organs, in importance, is probably second to no other specialty. There is no other more worthy your attention and study than this; it is a large and inviting field, as is attested by the large number of able and zealous workers in it. Men, at home and abroad, are to-day engaged in this study, and are sedulously cultivating this special and fascinating field of surgical science, and writing books exclusively devoted to it.

That branch of this specialty which claims our immediate attention is that of stricture of the male urethra.

If you will note the very large number of cases which have been treated during the past two or three months in this hospital, you will fully come to realize how much of our time is consumed in the management of these cases. In manipulating the urethral outlet, we are obliged to "make haste slowly." Great patience is required, if we would do this work well. During my present term of service, you have witnessed nearly, if not quite, all the operations for relief of urethral stricture. Some of the cases have been attacked, as they say in military parlance, by gradual approach with the filiform bougie; others by direct assault with the knife: and in no case has there been failure to relieve the stricture, and no death has yet followed the treatment we have employed. Operations for relief of stricture may be stated in their order of merit thus:

| | |
|-------------|-----------------------|
| Dilatation. | Internal urethrotomy. |
| Divulsion. | External urethrotomy. |

To restore the urethral outlet to its normal condition, it is advisable, if practicable, to employ, first of all, means least liable to cause irritation, pain or inflammation. The preliminary instrumental treatment should be simply explorative in character, not persisted in too long, nor abandoned too readily, unless it becomes at once apparent that a second or third trial to reach the bladder will be useless. An interval of three or four days or more of rest should be allowed a patient, before repeating the same process of instrumentation, in order to give time for all traces of irritation to subside.

I have a good illustration of the practice here advised in the case of Cronk, twenty-eight years of age, who entered the hospital on the 16th of March last. I have been able to obtain the following history of this case:

Cronk first contracted a gonorrhea when he was but fourteen years of age. He had gonorrhea the last time in 1869, or about eight years ago. He now has incontinence of urine. He could not control his urine for the past year, more especially for the past five months. It constantly dribbles away, wetting his pantaloons. He can not pass a stream of urine, if he tries; neither can he prevent its dribbling away from him. He seems in a truly pitiable condition; has an anxious and careworn expression of countenance; has chills; is nervous and restless; is discomforted and discouraged, and has come some distance in order to see if relief can not be given him in this hospital.

Without an anesthetic, three several unsuccessful attempts have been made to pass a filiform bougie into the bladder, and each trial has caused an acute epididymitis and orchitis, first upon the left side, then upon both sides. Acute urethritis was caused by the gentlest manipulation. Each trial was followed by severe chills, notwithstanding quinia, in full doses, was given. It was found, therefore, necessary to desist from further attempts to pass an instrument through the urethral canal. Hyoscyamus and camphor were now given in place of quinia, as the chills partook much of a nervous character. Blue mass, five grains at night, and fifteen grains of potas.

iod. three times daily, were ordered, and the latter continued for ten days. Solution of acetate of lead, alternating with poultices to the scrotum, constituted the local treatment.

On April 23d, a scrotal abscess was opened, which discharged freely.

April 27th. The orchitis having now subsided, the patient was etherized, and the urethra divulsed by a Gouley divulsor; after which a No. 12 nickel-plated steel sound passed readily into the bladder, withdrawn, and then a flexible catheter was passed and retained thirty-six hours. On its removal, a No. 12 sound was again introduced. Immediately after the operation, ten grains of quinia were ordered, and one-fourth of a grain of morphia, to be repeated two or three times at intervals of five to six hours.

May 1st. Patient comfortable; no tendency either to return of urethritis or orchitis. The process of causing still greater dilatation now began, and was continued until the patient was discharged, when a No. 14 (English scale) sound was easily passed. The penis was small. The left testis, which at one time was very large, was now reduced to its normal size; the patient had no longer chills; his appetite returned; his incontinence was cured, and his urethra became accustomed to the presence of instruments and was no longer hyper-sensitive, and he gained rapidly in flesh and strength.

You will observe that treatment in this patient's ailment extended over a period of about five weeks before an operation could be undertaken. Indeed, the stricture was for a time severely let alone, and the patient's general condition attended to. Any attempt to explore the urethra only resulted in causing acute urethritis; and the three attempts that were carefully made with the filiform bougie, were made at intervals of nearly a week, but so soon as the scrotal abscess discharged its contents, we were able to operate on the canal without causing acute and dangerous urethritis.

The next case I show you is one upon whom I shall have to perform external urethrotomy. The house surgeon, Dr. Stockton, will read to you the history of this case.

"Gideon Patterson, aged thirty-four years, came into hospital for relief of great distress in his urinary organs, not knowing apparently the nature of his ailment. He is single, a painter by trade, and has been afflicted since the spring of 1876. He entered the hospital May 8, 1877. He says he received an injury of the urethra one year ago, which was followed by inflammation and difficulty in voiding urine, and at that time a catheter was used.

"In January, 1877, a swelling appeared in the perineum, which formed into an abscess, broke, and several ounces of pus were discharged. Since this time his urine has, in part, escaped from this opening. On the 12th instant, Dr. Gay made trial to reach the bladder. First, a No. 2 steel sound was employed, then bulbous bougies of various sizes, then a trial was made with the filiform or whalebone bougie; but the instruments passed into a false passage, and therefore could not be made to enter the bladder. Taking a No. 12 steel sound, he could readily pass it three inches within the canal, when it could be distinctly felt to glide over the septum of the false passage. Having consumed so much time in these several trials to reach the bladder, and which caused more or less urethral irritation, Dr. Gay thought it advisable and discreet to desist from further manipulations to-day; but as there exists considerable swelling at the perineum, the doctor laid this open with the knife, making an incision an inch and a half in length, in order to prevent further infiltration of urine and also to give escape to pus."

May 19th. This patient is before you this morning for an operation, and I have determined to etherize him, and do whatsoever is necessary to be done. I find the same difficulty arising whenever I attempt to pass instruments as before. Every form of instrument, large or small, persists in escaping from the normal urethral canal and entering the false passage. A No. 12 steel sound is now passed three inches from the meatus, and is felt to meet with an obstruction; but after a little time, by steady pressure, passes along down

within the false passage, nearly or quite to the neck of the bladder. I now partially withdraw the instrument, and commit it to the hands of an assistant, who holds it firmly in place, while I cut down upon it, or very nearly upon it, so that only a very thin membrane interposes between the beak of the sound and my knife. I make an incision an inch in length, and now by pressure with my finger applied against the beak of the instrument, the sound is crowded away from the septum and enters the bladder with the greatest facility. It is next withdrawn and a flexible metallic catheter passed, to be used until the wound closes, but removed daily or every other day, in order to keep it cleanly. The patient is ordered ten grains of quinia and half a grain of morphia every six hours, until it shall be determined whether urethral fever develops or not.*

We have another case of some interest to show you.

James Cather, aged forty-three years, presents himself on account of stricture. He says he had gonorrhea some years since, but has not contracted the disease lately. He makes a small stream of water and it is forked. A No. 2 sound does not enter the meatus; neither will a No. 1 pass. The stricture seems to be located at the meatus. With a meatotome I incise the meatus quite freely. Now a No. 8 sound will pass, but is hugged tightly by the stricture, which is apparently half an inch from the external orifice. I now pass a tenotomy-knife along the side of the sound and divide the stricture, and, as you will observe, a No. 12 instrument readily passes into the bladder. This sound will remain *in situ* for an hour or more, then removed and glycerine injected, and on tomorrow a larger sound will be used.

In the normal urethra, the meatus is more or less contracted. It is provided with this peculiar mechanism, and may be likened to the nozzle of a hose; it is contracted in order to

* This patient was discharged from the hospital on May 28th, just nine days after the operation, in a very happy frame of mind. He believes a twofold cure has been wrought upon him, namely, cure of his stricture and cure of impotence. He says for the first time in many months he now has erections.

project the urine from the person. But in case of stricture in any part of the urethral outlet, if the meatus act as an obstruction to the introduction of instruments, it will be competent to make reasonable division of it; but it will be unfortunate if a too free incision destroys its contractile power, and causes the meatus afterward to gap too widely open.

It may be true, and doubtless is true, that the size of the normal urethra is conditioned by the size of the flaccid penis. The statements of those who thus affirm ought to be accepted as final until disproved. I do not wish to make written strictures upon the alleged size of urethral strictures. Although the caliber of some urethræ is represented as very large, and regarded as incompatible with health, and might therefore be held as proof of previous existence of gonorrhea or present gleet, I can not avoid the conclusion that if a man's urethral canal admits readily of a No. 24 bulbous sound, he has a urethra at least large enough for all the practical purposes of an ordinary urethra, and one also healthy enough to guarantee immunity from the pains and penalties of divulsion, dilatation or cutting. But the enthusiastic specialist has discovered that stricture is almost always present and never absent; that in size it is variable, ranging all the way from the size that will scarcely admit the passage of a filiform bougie, up to the size that will readily allow the entrance of a No. 24 sound. Can any one wonder why the old fashioned practitioner should be incredulous and amazed at the progress of modern urethral surgery! I hope it may not be regarded as impertinent to suggest that it is barely possible, when surgeons stretch the urethra too often and much, it enables them to stretch their conclusions.

It must be admitted that great advance has been made in our time in the management of stricture cases, and very many important improvements made in the device of instruments. The filiform bougie I have found indispensable in many instances, but I am sometimes foiled in attempts to pass it, when I have afterwards succeeded with a No. 8 or No. 10 nickel-plated conical sound.

I am still an adherent of the foggy belief that if a stricture once exists it always exists; or, in other words, if a stricture case be neglected after the urethra has been put upon the stretch and dilated to its utmost capacity, it will again return to the condition in which it was found when treatment began, unless the patient provides himself with a sound, and introduces it once or twice a week during the remainder of his life. If I am ever disabused of this idea or fallacy, I shall take pleasure in expressing obligations to the specialist.

BUFFALO, N. Y.

YELLOW FEVER.

BY J. B. MARVIN, M. D.

Late Resident Physician to the Yellow Fever Hospital; Professor of Chemistry and Microscopy, Hospital Medical College; President of the Louisville Microscopical Society, etc., etc.

When yellow fever first began its ravages in the south, Louisville declared against quarantines, opened wide her doors, and bade the fleeing refugees from the plague-smitten districts to come and freely partake of her hospitality. It soon became evident that among the many refugees who came to our city that cases of yellow fever would occur; and the mayor and board of health speedily set about preparing a suitable hospital for the reception and treatment of such cases.

The hospital.—One of the buildings of St. John's Hospital, beautifully situated on a hill three miles south of the city, and but a short distance from the junction of the Cincinnati and Nashville railroads, was selected. Two pavilion hospitals, containing respectively eight and ten rooms, were also erected and thoroughly equipped, a corps of experienced nurses engaged, and the writer appointed resident physician. These buildings were admirably adapted for the required purposes. The rooms were large and well ventilated; the partitions did

not extend to the roof; all the rooms communicated with each other, and opened on a wide hall-way.

Number of patients.—The first patient was admitted on August 5th, the last on October 17th. Total number admitted, eighty-nine; of which number seventy had genuine yellow fever—sixty-six being among southern refugees, and four originating in Louisville, among the inhabitants of the so called "infected district," near the Louisville and Nashville railroad depot; fourteen had intermittent fever, and five were not sick, children whose parents were sick in the hospital. The recoveries number fifty-eight; deaths thirty-one, from yellow fever. When we take into consideration the fact that all of these patients were moved to the hospital after the disease had become well marked,—some developing the disease while *en route* to this city, others being moved from Paris, Tenn., a distance of two hundred and fifty miles, and other southern towns, after being sick for several days,—the above mortality is not large.

Symptoms.—None of the cases were seen in the incubating stage of the disease. Most of the cases were in the second stage, some in the third stage; black vomit, etc., having occurred. The symptoms on admission were generally a hot, dry and harsh skin; in some cases that had been moved a long distance the skin was cold, clammy and bathed in profuse perspiration. Eyes bright and glistening; conjunctiva badly injected; the sclerotic tinged yellow, except in cases of several days' standing, when the eyes were heavy and lusterless, face flushed, great pain in small of the back, legs and head; tongue red and coated; bowels costive; great irregularity in pulse and temperature—the pulse running from thirty-five to one hundred and forty beats per minute, temperature ranging from ninety-seven to one hundred and six degrees. There is no correspondence between the pulse and temperature; frequently a high temperature being associated with a slow pulse, and *vice versa*. The respirations are quick and shallow. The perspiration is generally strongly acid in reaction, and possesses a most peculiar odor, difficult to describe,

but once recognized never forgotten—a dysenteric, rotten-hay or slacking-lime smell, not cadaveric as generally described by writers.

When the disease is well established, the fauces are swollen and of an intense red color; the tongue is enlarged, very red, the papillæ being very prominent, the edges are indented. At first there is a thick white or creamy coating on the surface; frequently the tip, edges and narrow space on each side of the median line are clean and not coated. As the disease progresses the coating gradually disappears; and in severe cases the papillæ become obliterated, its surface becomes smooth and cracked, very red and dry, resembling a piece of raw beef. The tongue bears no resemblance to the pale, flabby and enlarged tongue of malarial fever.

The skin is generally moist, and becomes tinged yellow in varying intensity. In some cases there is a herpetic eruption on the body and around the mouth and nose; severe urticaria occasionally occurs. Sudamina are frequent. A considerable proportion of convalescents suffer with furuncles and shedding of the epidermis.

The bowels become loose, the stools being very offensive, and generally black and tarry in appearance. Occasionally the stools resemble pea-soup, or they may be composed of shreddy mucus mixed with blood or bile, or be composed of blood and resemble black vomit.

The urine is high-colored, varying from amber to a greenish coffee color. This high color is due to an admixture of blood or bile, or frequently simply to a large excess of the normal pigment. The odor may be normal, faint and sweetish; in some cases it is very disagreeable, something like carburetted hydrogen or decayed leaves. The quantity is generally diminished; the reaction is acid, very seldom neutral, and never more than feebly alkaline, no matter how much blood or bile there may be in it. The specific gravity varies from 1.004 to 1.030; the average being 1.020. It is high in the beginning of the attack; diminishes as the disease progresses; rising again as convalescence ensues. A lowering in the specific

gravity, with an increased quantity of urine, is a favorable symptom. Sugar is never present, unless the patient has had previous diabetes mellitus. Bile, in varying amount, is present sooner or later in the *great* majority of cases. Albumen is present in *every* case,—the amount varying from a trace to nine-tenths the total amount of urine passed. The greater the amount of albumen, the graver the prognosis. In severe cases, albumen always appeared as soon as the *second* day; in mild cases, it may not appear until the fourth or fifth day. Albumen generally disappears from the urine as convalescence sets in; but it may persist until the patient is up and able to walk about.

Associated with albumen are granular tube-casts, stained greenish brown or yellow with bile, renal epithelium, more or less disintegrated, and large quantities of fine granular *débris*. The amount of this granular *débris* is much greater than I have ever seen in cases of acute Bright's disease from other causes. Renal derivations generally appear on the second day in severe cases; in mild cases, they may not be found until the fourth or fifth day. Vesical epithelium, in varying amount, is generally present in the urine. In some few cases there was a marked shedding of vesical epithelium preceding the appearance of renal derivations. No symptoms are of more value in the prognosis of a case than the amount of albumen and renal derivations. The smaller the quantity of albumen and tube-casts, the milder the attack, and *vice versa*. Renal derivations usually disappear as convalescence sets in, but they may persist in severe cases until the patient is able to be out of bed. In a small proportion of cases there were vesical and renal hemorrhages in considerable quantities. Urea varies from normal to less than one-half the normal amount; most generally it falls below normal. The urine speedily undergoes decomposition; in fact decomposition may take place in the bladder. Large quantities of vibrios and bacteria may be present when the urine is voided.

The breath.—Pure glycerin was smeared in the center of a clean, new glass slide, and held an inch or two from the nos-

trils or mouth of the patient. After a few minutes' exposure to the breath, the slide was examined under the microscope. Large quantities of very active vibrios were revealed, also roundish oval bodies, bacteria.

The blood.—A drop of blood from the finger was received on a slide, covered, avoiding pressure, and examined. The corpuscles were jagged and crenated; frequently the red globules were breaking up, forming as it were daughter-cells. In severe cases, especially after black vomit had occurred, there was a very large increase in the number of white corpuscles, the proportion frequently being as one white to five or ten red corpuscles. Scattered among the corpuscles were found vibrios and bacteria, frequently five or six very active bacteria being in the field. More extended observations, in this and other fevers, must be made before attaching undue importance to the existence of these bodies in the blood and breath. Every possible precaution was taken, in making these examinations, to avoid contaminations. The examinations were made with a Tolles $\frac{1}{16}$ inch immersion objective and a "B" ocular.

The stomach.—Irritable stomach and nausea, in varying intensity, are present in all cases. After the stomach had been emptied of food, the first ejections consist of glairy mucus and epithelium, streaked with blood, bearing a striking resemblance to the rusty sputum of pneumonia. Bilious matter was very frequently ejected, sometimes in considerable quantity. Pure blood was frequently ejected in large quantities; later in the disease, vomiting of blood frequently alternating with and following black vomit. The vomit is acid, patients frequently complaining of its burning the throat and mouth.

Black vomit occurred in about fifty per cent. of the cases, the amount varying from a few spoonfuls to more than a pint at each ejection. This symptom has not proved as unfavorable as is generally believed. Ten cases have recovered after having had black vomit. One case, a mulatto, having vomited a large quantity of it on three different occasions, with intervals of one and two days, yet recovered. The coffee-

ground or black vomit consists of blood, more or less broken down and digested by the gastric juices and bile, epithelium and fat globules. There were also found large quantities of vibrios, an oval (not recognized) fungus, and frequently very large crystals of hematoidin.

Hiccough and retching are constant symptoms, and may prove very distressing. In some severe cases there are spasmodic contractions of the diaphragm, causing most violent and painful retching; the contraction is so violent in some cases as to partially raise the patient from the pillow. Generally the epigastrium is not markedly sensitive on pressure. In those cases having a temperature ranging over one hundred degrees, great restlessness and nervousness are present; in those cases in which the temperature ranges from ninety-seven to one hundred degrees, the patient lies in a stupid, lethargic condition. A hemorrhagic tendency is present in all cases. In all severe cases, hemorrhage varying in amount occurs from some portion of the body—the eyes, nose, ears, mouth, rectum, uterus, bladder, kidneys, etc.; most frequently from the mouth and nose. The hemorrhage is passive, generally an oozing, and is easily controlled; in some cases, however, it comes in a stream from the nose. These passive hemorrhages are caused either by an alteration in the blood itself, or some change in the epithelium lining the vessels and mucous membranes, or by both.

The unfavorable symptoms are a fiery red, dry and cracked tongue; irritable stomach, with constant nausea and vomiting; great pain over the bowels; suppression of urine; passage of feces in bed; rejection of food and medicine by the stomach and bowel; great delirium, getting out of bed, etc.

Before death muscular twitchings frequently occur, the extremities get cold and clammy, and large drops of sweat appear on the face and neck. The temperature may fall to 97 degrees; immediately after death the temperature begins to rise, and may go as high as $106\frac{1}{4}$ degrees under the axilla, the body remaining warm for twelve hours or more. Spare-built persons, with light hair and complexion, resist the dis-

ease better than stout, plethoric persons, with dark hair and complexion. The average duration of the disease in fatal cases is four days.

Diagnosis.—The diagnosis of yellow fever is not as easily made as one would be led to believe from the literature of the subject. It presents a striking resemblance, in many respects, to pernicious intermittent and bilious remittent fevers. The chief diagnostic points are the peculiar smell, tongue, great irregularity of pulse and temperature, and the constant existence of albumen and renal derivatives in the urine.

Pathological anatomy.—Cadaveric rigidity occurs very early, and is very marked. The skin is of a bright yellow or saffron color, quickly changing to a purplish black over the dependent portions of the body. In severe cases the entire surface of the body becomes purplish black within six hours. The mucous membranes are tinged yellow, and the cellular tissues are stained of a bright yellow color.

The peritoneum and mesentery may be normal; in a considerable proportion of cases they are more or less congested.

The stomach, as a rule, does not appear congested, as stated by writers upon this disease. The organ may be greatly distended with gas, filled with black vomit, or almost empty; more or less black vomit is always present. There is no marked injections of the veins—no ecchymotic spots; the mucous membrane is pale, there being no hemorrhagic erosions or ulcerations, no evidences whatever of acute catarrh. In only one case was there found thickening of the mucous membrane and enlargement of the rugæ. On examining a thin section under the microscope the glands are normal, the villi are not changed; the free extremities of the villi contain blood, which has oozed from the capillaries and is piled up under the epithelium. The microscopic examination clearly proves that the hemorrhage in this organ is passive, and not dependent on active congestion. The clinical history of the vomit confirms the microscopic examination. The changes stated to have been found in the stomach are post mortem changes.

The intestines generally show no marked changes; they always contain more or less black vomit. In some cases there are patches which are badly congested. In one case intussusception was found in three different places. A section of the gut, when examined under the microscope, may appear normal; in other cases, the villi and glands are in a state of acute catarrh.

The spleen presents no marked deviation from health; generally normal in size and consistency, and frequently darker in color. In cases giving a history of previous malarial trouble, the organ was considerably enlarged. On microscopic examination, the organ appears normal, except in those cases having had malarial fever, when the pigmentation peculiar to malarial fevers was found.

The liver varies in color, being bright yellow, orange, nutmeg or mottled, or normal. The organ is generally enlarged, the enlargement being very slight in some cases. It is very firm, tough and elastic. On section, the hepatic cells are found in a granular condition, frequently stained with bile; nucleus pale and frequently obscured by oil globules. Within and around the cells are large quantities of oil globules, there being a fatty infiltration as well as fatty degeneration. There is frequently an increase in the connective tissue, with a consequent pressure upon and destruction of the neighboring cells. In one case, aged twenty-seven years, not a drinker, who had suffered at intervals for two years with malarial fever, there was an enormous increase in the connective tissue, visible to the eye, giving the organ the appearance found in cirrhosis. On section, all the appearances of cirrhosis were found; in parts there were fatty degeneration and infiltration, and a large amount of a delicate fibrous growth, resembling areolar tissue, minus the fat.

The kidneys are congested, and in some cases considerably enlarged; the capsules do not readily peel off; the malpighian tufts are prominent. On section, tubal and intertubal hemorrhages are frequently found. The tubes are choked up with fine granular *débris* and epithelium; in some parts the tubes

are empty and denuded of epithelium. Fatty degeneration, slight in degree, is frequently found.

The bladder may present no changes; it may be full or empty and slightly contracted. In those cases having suppression of urine for any length of time before death, it is badly congested, the mucous membrane showing large ecchymotic spots. The gall bladder always contains thick yellow or blackish bile; in some cases it is enormously distended, the mucous membrane being congested.

The lungs and pleura presented no constant changes. In several cases there were recent pleuritic adhesions; in one case there was severe pneumonia. In some cases the lungs are completely collapsed. The color is generally dark and mottled; ecchymotic spots are frequent.

The heart may be full or empty. In some cases there is marked fatty degeneration, the walls being pale and friable. Frequently the organ is normal. The pericardium always contains more or less reddish fluid, the amount varying from one to six ounces. No lesions were found in the cerebrum, nor constant changes at the base of the brain. In some cases which had had marked delirium, congestion and softening were found at the base. The spinal cord was not examined.

Treatment.—On admission the patient is given a hot mustard foot-bath while under the cover; he is covered with one or two blankets, sufficient to keep up the perspiration; profuse and indiscriminate sweating, by means of blankets or otherwise, is injurious. If the bowels are at all costive, half an ounce of castor-oil, with fifteen drops of turpentine, are given. If the patient objects to oil, or there is much nausea, with foul tongue, one grain of calomel and three or four of bicarbonate sodium are given every hour until four doses have been taken. If there is much nausea or retching, a pint of tepid water, containing a dessert-spoonful of mustard and salt, is given to empty the stomach. In all cases five grain doses of quinia were given every two or three hours until cinchonism was produced, a sufficient quantity being given daily to keep up a moderate cinchonism. If the stomach was irritable, the qui-

nia was given in thirty grain doses by enema every six hours. In a few cases, after cinchonism had been induced, ten grain doses of salicylate of sodium, every six hours, were substituted for quinia, apparently with good effect.

Whenever the skin became very hot and dry, the patient was sponged off with cold water, to which a few ounces of alcohol had been added, the sponging being repeated as often as necessary. Cracked ice and ice-water, in small quantities at a time, were allowed *ad libitum*. If the tongue became very dry, red and cracked, dessert-spoonful doses of turpentine emulsion—containing twenty per cent. of turpentine—were given every three or four hours. If this was rejected, fifteen drop doses of dilute muriatic acid, every three or four hours, were substituted. A pinch of salt placed on the tongue would frequently relieve hiccough; in severe cases, tincture of valerianate of ammonia was better. Lime water, subnitrate of bismuth, creasote or chloroform, in small doses, was useful in quieting the stomach and relieving nausea. When there were present nausea and frequent vomiting, with desire to go to stool, with pain in bowels and great tenesmus, the following prescription was most valuable:

R Bismuth, subnitrate, ʒ ij
 Creasote, gtts. viij
 Lime water, ʒ ij. M.

Sig. Dessert-spoonful *pro re nata*.

If there was much tenderness over the bowels, a blister, six by six inches, was applied; in mild cases, a mustard-plaster or turpentine stupe was substituted. In stout, plethoric persons six or eight leeches were applied over the bowels; the leeches generally die from the bad blood. If there is any difficulty in passing urine, or diminution in its quantity, half an ounce of the infusion of digitalis with ten grains of acetate of potash, is given every two or three hours. This proved a most valuable remedy, only failing in two cases. In addition, a mustard-plaster, cupping, or alternate applications of warm and cold water over the bowels, were useful. Hypodermic injections

of one-eighth of a grain of muriate of pilocarpine were tried in several cases, but without apparent benefit.

For nervousness and sleeplessness, chloral hydrate is the *best* remedy; give thirty grains each of chloral hydrate and bromide of potash, in one or two ounces of warm milk, by enema. This combination has a most happy sedative effect; it also lowers the temperature. In some cases, tincture of hyoscyamus has a happy effect.

Patients are very sensitive to the effects of opium and its salts; *very small* doses, either by the mouth or rectum, producing alarming narcosis. Opium did not appear to interfere with the proper functions of the kidneys; its use was discontinued solely on account of its effect on the brain. A number of patients were given morphia while *en route* to this city; they never came from under the influence of the drug, but lay in a stupid, lethargic condition, pupils contracted, and died with all the appearances of narcotic poisoning. In some patients, who were constant eaters of morphia, most distressing appeals were made for it. Various devices were resorted to in order to deceive them; about a fourth of a grain of quinia in powder was given, and followed by thirty grains of chloral hydrate. If this failed, a hypodermic injection of eight or ten minims of *water* had the desired effect, quieting the cries of the patient and putting him to sleep.

If hemorrhage from the nose or mouth became free, a spray of Monsel's solution (half strength), always checked it. For hemorrhages from the stomach and bowels, if deemed advisable to check them, ten minims of Monsel's solution were given every hour. For renal hemorrhage, ten grains of gallic acid were given every three hours. In some cases fifteen minim doses of aromatic sulphuric acid were substituted.

Stimulants are required in every case. Port wine proved most acceptable and beneficial, it being retained when the stomach rejected everything else. Acid wines and *champagnes* disagreed in *every* case; complaints of their bad effects were so general, that they were discontinued. Brandy and whisky were given in all cases, either by mouth or rectum.

During convalescence, ale and beer were much relished and were freely given. During the first two or three days of the attack, the less food taken the better. Milk, chicken-broth, beef essence, etc., according to the desire of the patient, were given in small quantities every hour. During convalescence, oyster soup, soft boiled eggs, crackers, toast, etc., in moderate quantity, are given. Great care is required to prevent the patient from over-eating. Not a single relapse occurred in this hospital, which is largely attributable to the great caution exercised in regulating the dietary of the patient.

General remarks.—Yellow fever is a continued fever, marked by slight remissions. Of the severe form of the disease there are two distinct types—one characterized by a hot, dry skin, and a temperature ranging from one hundred degrees to one hundred and six degrees; in the other variety the temperature may rise to one hundred and two degrees for the first day or two; it then falls and never rises above one hundred degrees, generally ranging from ninety-seven to one hundred degrees; the skin is cold and clammy, and is more markedly yellow than in the first variety; the pupils are contracted; this latter variety is the more fatal.

The disease is clearly dependent upon a specific blood poison, as yet not demonstrated by the microscope, unless we regard the changes found in the blood as detailed above, as the *cause* rather than a *result* of the disease. By adopting the theory of specific blood poisoning, the symptomatology of the disease is readily understood. Every carefully observed and recorded fact bearing on the contagiousness or infectiousness of the disease is of great importance. As bearing on this subject, I wish to record the following experience:

I remained at the hospital for a month as resident physician; eat and slept on the ground-floor in the building with patients, made daily examinations of the various excretions and secretions of the patients, and held frequent post mortem examinations. I never had the slightest symptom of the disease. There were twenty-eight employes on the premises as nurses, cooks, washer-men, etc., in constant contact with the

patients. Physicians and clergymen from the city paid daily visits to the hospital. The ladies of the Flower Mission paid frequent visits, going through the wards distributing flowers, etc. These parties, returning to the city, came in contact with numerous persons; yet not a single individual who remained at the hospital, or who visited it or came in contact with parties visiting it, ever had yellow fever or any disease resembling it. The clothing and baggage of the patients were not burned or disinfected, but were stored in the building in which the nurses and myself slept and eat.

Only such hygienic regulations were adopted as would be enforced in any well-regulated hospital. The rooms were well ventilated and kept scrupulously clean. The bedding and bed-clothes were kept clean, and whenever soiled were aired and washed. The mattresses were never burned. Vomit, dejecta, etc., were not allowed to remain in the rooms, were emptied in pits about a hundred yards from the wards. The vessels, bed-pans, etc., were kept clean; if they smelt at all, they were aired or sprinkled with carbolic acid. Dead bodies were not allowed to remain in the wards, but were carried to the dead-house.

Whenever the nurses or myself felt "out of sorts," quinia was freely given. I had been troubled greatly with malaria before going to the hospital, and was taking quinia daily; at the hospital I suffered less from malaria than when in the city.

LOUISVILLE, KY.

SULPHATE OF CINCHONIDIA.

BY A. G. CRAIG, M. D.

I commenced prescribing the sulphate of cinchonidia in the summer of 1875. During this summer there had been, all over the United States, an unprecedented rain-fall. In July and August the Ohio river was over its banks, and the "back-

water" was up all the creeks, and covered the low bottoms, destroying the corn and other crops, almost matured. After the wet season was past, the river fell rapidly, and during the months of August and September there was, all along its course, an offensive stench produced by the decaying vegetation. During these months there was more sickness in this locality than I had ever known before or since in the same length of time. There were cases of intermittent, remittent, and typho-malarial fevers in almost every family. There was a malarial element in almost every form of disease; even children with cholera infantum required an antiperiodic.

About this time I received a sample ounce of the sulphate of cinchonidia from Powers and Weightman, of Philadelphia. I prescribed it at first for cases of intermittent fever, and it proved so efficient that I afterwards prescribed it for remittent and typho-malarial fevers with equal success. Since that time I have not used more than one ounce of the sulphate of quinia in my practice, but have used several hundred ounces of the sulphate of cinchonidia with entire satisfaction. I do not consider cinchonidia better than quinia, but I do consider it equally efficacious in curing malarial diseases, and in some cases, where there is an idiosyncrasy, or prejudice existing against the use of quinia, it is to be preferred. My experience has not been limited, and I am satisfied that there is little if any material difference in the virtues of the two medicines. I consider cinchonidia equal to quinia as a tonic, antiperiodic, and antipyretic, and in all diseases where there is a malarial complication. Cinchonidia can, at the present time, be bought at about one-seventh the price of quinia; and this ought to commend it to the country practitioner, who has to furnish his patients with medicine, many of whom are extremely poor. Cinchonidia is not as reliable as either cinchonidia or quinia, and I have discontinued its use in my practice altogether. Quinia or cinchonidia is readily made into a pill by the addition of glycerin, about one drop to each three grains—a three-grain pill not being inconveniently large. In obstinate intermittents, five drops of Fowler's solution, after

each meal, will prove a valuable adjuvant to the cinchonidia. Sulphate of cinchonidia is very soluble in spirit of nitrous ether; one ounce will dissolve readily fifty or sixty grains. In cases where there is torpid liver and constipated bowels, the following is a favorite alterative and cathartic pill:

℞ Leptandrin, gr. xxx;
 Podophyllin, gr. iv;
 Extr. colocynth. comp., . . . gr. xx;
 Hydrarg. chlor. mit., . . . gr. xv;
 Extr. tarax., q. s.

M. ft. pil. No. xv. Sig., one or two pills *pro re nata*.

There are a peculiar cachexia and anemia produced by malaria generally present in persons who have had repeated attacks of malarial fever, and there is a constant tendency to relapse, in spite of cinchonism. Accompanying this condition there is an enlargement of the spleen, and a pale, bloodless, and icteroide hue of the skin. In these cases iron is the great remedy combined with quinia, or cinchonidia, and strychnia.

℞ Cinchonidiæ sulphatis, ʒ ss;
 Pilulæ ferri carbonatis, ʒ iss;
 Strychniæ sulphatis, gr. i.

M. ft. pil. No. xxx. Sig., one pill *ter in die*.

The above remedies seldom fail to reduce the enlarged spleen to its normal size in a few weeks, and restore the patient to health.

In the management of cases of malarial cachexia, the removal of the patient to a healthy locality, when practicable, is of prime importance.

VEVAY, IND.

A CASE OF BRIGHT'S DISEASE.

BY B. R. HELMS, M. D.

On May 24th I was asked to see a child three years old, who had always been very healthy, except during the previ-

ous six months had suffered from malaria. The symptoms found were fever, thirst, anorexia, pain in the loins and vomiting, and there was also general anasarca, especially a fullness just below the eyes. The child was treated with quinia and iron, on the supposition that the dropsy was due to anemia, a result of malaria. There was no improvement, and a sixteenth of a grain of elaterium was given three times a day with no good result. Dr. Mathes was called in consultation, and bitartrate of potash and jalap were substituted for elaterium, but with little benefit.

On examining the urine its specific gravity was 1040, acid reaction, albumen in large quantities, and some sugar. Elaterium was again given, one-eighth of a grain every three and a half hours, which relieved him of the dropsy and dyspnœa, and left him almost a skeleton. The latter part of June, the pulse was 144 and respiration 40, at which time the dropsy again appeared.

An abscess formed in the right testicle and one on the inside of the right thigh, and were discharged. *Veratrum viride* was given to control the pulse, and *jaborandi*. The anasarca decreased somewhat, the appetite improved and became ravenous. The specific gravity of the urine was now 1019, albumen in abundance, and tube-casts were present. On the 28th of June I found the child in a semi-comatose condition; but after this time the albumen decreased until there were only traces of it in the urine, the child gained strength and the pulse came down to eighty,—the elaterium and *jaborandi* being continued with cod-liver oil and quinia, the elaterium in one-fourth of a grain dose. I saw the child last on the 11th of July. It passed under the care of a noted "cure-all," and died some weeks afterward. The points of interest in this case, are the effect of the *jaborandi* on the albuminuria, and the large doses of elaterium given without injury.

CARLISLE, IND.

Reviews.

A Clinical History of the Medical and Surgical Diseases of Women.

By ROBERT BARNES, M. D., London, Censor of the Royal College of Physicians, etc. Second American from the second and revised London edition. With one hundred and eighty-one illustrations. Philadelphia: Henry C. Lea. 1878.

Dr. Barnes gracefully and worthily dedicates this second edition to Dr. Fordyce Barker. This appropriate recognition will commend the volume to American readers.

Those who had the pleasure of making the acquaintance of Dr. Barnes at our International Congress, those who heard him either in conversation or in public discussion—always frank, clear, positive and instructive, and with almost impetuous utterance as if of an overflowing fountain—will be reminded of our distinguished visitor in almost every page of his book: the book well represents the author.

We shall suggest no comparison between it and other well known volumes upon the same subject. Nevertheless we pity the doctor who, having any considerable practice in diseases of women, has no copy of "Barnes" for daily consultation and instruction. It is at once a book of great learning, research, and individual experience, and at the same time eminently practical. That it has been appreciated by the profession, both in Great Britain and in this country, is shown by the second edition following so soon upon the first.

Want of space forbids an analytical notice of the work, even if such notice should be expected of the second edition of a book. The author remarks in his preface:—"The book has been subjected to conscientious revision. It is hoped that some of its defects have been either removed or lessened. By pruning redundancies and by rearrangement, space has been gained for the addition of new matter. The size of the

book has not been increased; yet room has been found for a new Chapter on the Relations of Bladder and Bowel Disorders to the proper subject-matter of the book."

We heartily wish this second edition even a greater success than that attained by the first.

The Identification of the Human Skeleton—A Medico-Legal Study, to which was awarded the Prize of the Massachusetts Medical Society for 1878. By THOMAS DWIGHT, M. D., of Boston, late Professor of Anatomy at the Medical School of Maine. Boston: David Clapp and Son, Printers.

The result of a criminal trial or of a lawsuit sometimes depends on the identification of a skeleton, or of parts of it. While in such cases the duties of an expert are of great importance, they are attended by many difficulties, because of the different statements made by authors in relation to the proportions of various parts of the skeleton. The purpose of the author is to lessen these difficulties by giving practical directions how to work, and by testing the truth of the statements of authors, and when these disagree, indicating which is most trustworthy.

The following questions are briefly but very intelligently considered: First—are the bones human? Second—do they belong to one or more individuals? Third—what is the sex? Fourth—what is the age? Fifth—how long is it since death? Sixth—what is the height? Seventh—if certain parts are wanting, can we estimate their size? If so, how?

The conclusions given are the result evidently of much original study and examination, and they are compared with those arrived at by other observers.

Because of its condensed, yet clear statement of facts, and its entire freedom from unnecessary words, this essay may be recommended as a model to writers on scientific subjects.

The author makes free use of the graphic method, and his numerous charts and tables add much to the value of his work.

J. R. W.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland, at its Eightieth Annual Session, held at Baltimore, Md., April, 1878. Baltimore: Ines and Company, Printers.

The first ten pages of this book are occupied by the proceedings of the society. Following this is the opening address on Homœopathy, by the president, Prof. A. B. Arnold, M. D. He thinks that if such men as Liebig, Trousseau, Virchow and Sir James Simpson entered the polemical arena against homœopathy, he may likewise do so. He treats his subject in a dignified manner, and shows that most of Hahnemann's followers in this generation are his apologists, admit that his pathology is indefensible, his theory of chronic diseases not worthy of a serious thought, and the belief in the augmented potentiality of medicine by dilution as sheer nonsense.

Dr. S. C. Chew gives an address full of interest, commemorative of the late Prof. Nathan R. Smith. Accompanying this is a likeness of the deceased.

The annual oration is by Prof. Ira Remsen, on Chemistry in its Relation to Medicine. He begins his oration by a blow at the practice of requiring a thesis from the candidate for graduation, by saying—"Eleven years ago, in company with ninety-nine others, I was proclaimed fit to enter upon the career of a medical man. My erudition in medical matters was exhibited in a thesis on Fatty Degeneration of the Liver, a subject of which I was and am profoundly ignorant. I had in fact never seen a liver which had undergone fatty degeneration, nor a patient who possessed or was supposed to possess one." . . . The address is a review of the discovery and application of some of our most important drugs; of the detection of impurities in the air, water, etc.

Among the papers deserving special mention are the Report on Surgery, by Dr. Allan P. Smith; Urethral Stricture, by Dr. Thomas R. Brown; Practice of Medicine, by Dr. John S. Lynch; Spontaneous Generation, by Prof. F. Donaldson, M. D.; and General Paralysis of the Insane, by Dr. I. D. Thomson.

A. M.

A Manual of Operative Surgery. By LEWIS A. STIMSON, B. A. (Yale), M. D., Surgeon to the Presbyterian Hospital, and Professor of Pathological Anatomy in the Medical Faculty of the University of the City of New York. With three hundred and thirty-two illustrations. Philadelphia: Henry C. Lea. Cloth, 477 pp.

While one can hardly say there is need of another work on operative surgery, this one of Dr. Stimson will be of great service to medical students and the younger members of the profession, as it has the merit of describing most of the surgical operations performed on the human body in a plain and simple manner. Operations that can only be described in general terms, as the removal of tumors, etc., are excluded.

In description the author has avoided that minuteness of detail in non-essentials, which Mr. Syme condemned so vigorously in the teaching of the present day, as "the fiddle-faddle instructions, not only for using but even for holding the knife, which sufficiently denote the poverty of the intellect whence they proceed, and the lowness in aspiration to which they are addressed." Dr. Stimson evidently takes it for granted that those who consult his book will have a slight knowledge of anatomy, a little mechanical skill, and some common sense. These qualifications he has the right to expect in even the tyro in surgery, but which are unfortunately often wanting in those of many pretensions. Whenever a knowledge of details is necessary to the correct understanding and performance of an operation, they are described very fully.

The book is well printed, and profusely illustrated. But few of the engravings, however, are original, most of them having been taken from works with which the profession is familiar.

J. R. W.

Clinic of the Month.

A CASE OF POLYARTHRITIS SUPPURATION, WITH MYCOSIS ENDOCARDII.*—A young man, twenty-four years of age, was taken sick on September 6, 1877. At first he had general malaise and difficulty in swallowing. A few days later he had pain and swelling of various joints. He was admitted to the Seraphim Hospital, Stockholm, September 13, 1877.

Both wrist-joints, especially the left, and the left hip, knee and ankle-joints, were then considerably swollen and tender; and these joints were the seat of violent pains. There was fever, though the temperature never rose above 39.2° . The swelling about the left wrist extended both upward and downward. On the 9th of October an incision was made over the joint, and a large quantity of laudable pus was evacuated. In the meantime the patient's general condition, which during his whole sickness had been very poor, did not undergo any improvement; the fever continued, the pains were as violent as ever, his strength failed, and a rather faint murmur became audible with the systole, both at the apex and base of the heart. The area of precordial dullness was not increased. During the last days the heart's action was irregular, but otherwise the cardiac phenomena remained unchanged. The patient died on the 14th of October.

At the post mortem examination an abscess was found over the wrist, communicating with the joint, which contained discolored pus; the cartilages of the joint were destroyed. The left hip and knee-joints were also full of pus; the cartilages more or less extensively altered, the capsule of these joints disorganized, and the surrounding connective tissue in some

* Translated from *Nordiskt Medicinskt Archiv*, by JOHN A. OSTERLONY, A. M., M. D.

places infiltrated with pus, and in other places in a state of gangrenous disintegration. In one of the pulmonary valves was a perforation nearly a centimeter in diameter, whose border was formed of loose discolored tissue in process of disintegration, and consisted of detritus and cells in a state of fatty degeneration, and of masses of microphytes; these latter were arranged in strings like beads, or loose or aggregated in large numbers forming balls. In the immediate neighborhood the valve was considerably thickened, yellowish in color, and permeated by a great abundance of microphytes. In the mitral valve was a small circumscribed spot, presenting the same process with accumulation of microphytes, and a superficial and limited inflammatory softening of the valve. There was parenchymatous inflammation of the kidneys and spleen.

REMARKS ON OVARIOTOMY.—Rarely can an operation have such a fate as ovariectomy. In 1843, Dieffenbach, the boldest of all surgeons then living, wrote that ovariectomy was murder, and that every one who performed it should be put into the dock. Now we save lives with it by the hundred, and the omission of ovariectomy in a proper case would, in these days, be looked upon as culpable negligence.

But the operation of ovariectomy has also something peculiar to itself. No operation requires so much experience and courage. In no operation is the most important qualification of an operator—the power of meeting unexpected difficulties—brought into so clear a light. One never knows what may be encountered; if there be adhesions and where, what the pedicle may be, its length, and so on. And in no other operation is the terrible fact so true, that no operator in his first twenty cases will have such good results as in his second or third twenty cases. This terrifying proposition is true as a matter of fact, and it is well that the public is ignorant of it; for no operator can begin with his twenty-first case, and must, therefore, get over his “reign of terror.” This can certainly not be said of other operations. I am quite convinced that many a young surgeon has done his first amputation as well,

and with as good a result, as his fortieth or fiftieth. Speaking truthfully, this could not be said of ovariectomy; and it must be insisted upon, that every beginner has previously assisted at twenty or thirty operations.

When I look back twelve or fifteen years, and recollect how slight were the preparations in my clinic for an ovariectomy, and how it was performed as compared with the precautions now taken, no one can wonder that the mortality has been so much diminished. After I had obtained all the information I possibly could from reading all the works I knew of, I at last began to operate. My first six cases—certainly most unfavorable cases—all died. This so discouraged me, that I ceased to operate, and I spent two of my holidays in going to Spencer Wells in London and learning there. Then I operated again and with better results; but still lost half my patients. Then drainage still further improved my results, and death from septicemia, which had been by far the most frequent cause, was much less frequent; and, since the adoption of Lister's antiseptic, there has not been a single example of septicemia, and the proportion of recoveries has been in the highest degree satisfactory.

Thus, the antiseptic method, and next the careful avoiding of any cooling of the blood, which is so serious when the peritoneum is exposed, lead to results which were previously quite unattainable; but we must not, therefore, avoid the trouble of a very careful preparation. This care yields a rich return. Formerly, the patient was placed on the table, the tumor removed, the peritoneum cleansed as much as possible, and the wound closed. Now, after a soap-bath, the patient's abdomen is shaved, cleansed with ether, and several times washed with a five per cent. solution of carbolic acid. The whole surface, except the abdomen, is carefully covered with very warm towels, and a hot-water India-rubber bag is placed between the feet in order to restore to the mass of the blood, by warming the periphery, what is lost by laying bare a large surface of peritoneum. And our sponges and instruments are placed in a five per cent. carbolic solution, and our clean

washed hands are disinfected by the same solution. The room and all liquids and objects are also warmed, if possible; and, lastly, a carbolized cloud from two steam-sprays is directed upon the abdomen, and the operation begins. A dense carbolized mist covers the whole field of the operation, until, at the conclusion, a protective Lister's bandage has been applied. (Dr. J. N. Von Nussbaum, in the *British Medical Journal*, October 26, 1878.)

TREATMENT OF WOUNDS OF THE SUPERFICIAL PALMAR ARCH BY ACUPRESSURE.—A perusal of the various English works on surgery does not impress me that this simple method is practiced as frequently as it might be. I record a case which occurred lately in my own practice. A lad, whilst cutting some toffee from a plate, cut his ulnar artery through, just at the point where it takes its bend toward the radial side of the palm (in the "line of fate"), and when brought to my house, was losing blood rapidly, per saltum, from a deep wound about an inch and a half long. I applied Esmarch's bandage, and tried to find the bleeding points, but to no purpose. I then plugged the wound and bound the hand to a dorsal splint firmly, so as to get pressure on the vessel by means of the tension of the palmar fascia, and applied compresses over the trunks of the radial and ulnar vessels. He soon returned to me bleeding as profusely as before. I then determined on acupressure, and taking a stout harelip-pin, passed it through the tissues about half an inch from the edge of the cut, under the artery, and out again to a corresponding distance the other side of the wound, and placed the limb again on the splint. This had the effect of entirely stopping the bleeding; the needle was removed on the fourth day, and the entire wound had closed by the end of the week.

I am well aware of cases of a like nature being treated by passing a harelip-pin under the radial and ulnar at the wrist; but although it has been effectual, it is not without its dangers; and I contend that in cases of wound of the superficial palmar arch (and this is not the first I have treated similarly),

acupressure at the point of injury should be resorted to at once. As a matter of anatomical fact, the blood-vessels, as it were, cleave to the palmar fascia, even after a long escape of blood; and, with ordinary anatomical precision, and a knowledge of the possible contingencies of irregularities, should be secured. A double needle might be used in some cases, to make quite sure—one on either side of the division in the vessel. I need hardly say that these few remarks apply more particularly to wounds involving the superficial arch, although the "deep" arch is topographically not so deep or so ungetatable by this method as might be imagined. (Edward Bellamy in *Lancet*.)

THE USE OF JABORANDI.—Within the past year or two jaborandi has become a very popular and useful drug at Bellevue Hospital. In uremia and in acute and chronic parenchymatous nephritis, it has accomplished especially good results.

In uremia it is a very effective substitute for the old hot-air bath, acting more quickly and surely. As it has been shown to increase markedly the excretion of urea, it is probably more efficient than the baths in relieving uremic phenomena. A patient was brought into the hospital some weeks ago, suffering from convulsions and delirium. She had no edema, but her urine was nearly solid with albumen, and contained small casts and blood. She was given a drachm of the fluid extract of jaborandi, hypodermically, and ten minims of Magendie's solution. In fifteen minutes she was sweating profusely, and the convulsions had ceased. She was restless and wandering in mind for the next twenty-four hours, but had no other bad symptoms. A drachm of jaborandi was given every other day subsequently, and in a week the albumen had nearly disappeared from her urine, and she felt quite well.

Cases of chronic nephritis have been treated with the drug very satisfactorily. Some who did not improve or get rid of the edema under digitalis and potassium, have shown immediate improvement under jaborandi. It is given in drachm doses every other morning, the patient being kept in bed until

dinner-time, when the sweating is over. It is better not to give it at night, as the bed-clothes become saturated with perspiration and sleep is disturbed and uncomfortable.

Jaborandi weakens the heart. It is dangerous when the pulse is poor and the system debilitated. If given to a patient in this condition with uremia, he falls into a cold perspiration, and edema of the lungs, coma and death follows.

Yet it has been used several times in the treatment of pulmonary edema in doses of ten to fifteen minims, every one or two hours. The autopsies have shown the usual changes.

It has been used also in pleuritic effusions, but does not seem to "sweat out" the intrathoracic liquid very much. Besides, it produces a nausea and salivation not at all pleasant.

The drug loses its effect in some cases, and the dose has to be increased. The usual variety in its action has been noted. Sometimes it causes salivation only; most frequently salivation and diaphoresis. If the dose is carefully regulated, nausea and vomiting need not be a frequent complication. The urine is, in cases of chronic Bright's disease, somewhat diminished in amount, unless renal congestion or an acute nephritis is complicating the case. Jaborandi has proved, so far, of most certain service in the chronic stages of Bright's disease, and in uremia brought on during its initial attacks. When an acute attack is lighted up on a chronically inflamed organ, and when the system has already become weakened and anemic, the drug may be useful, but it will also be dangerous. (The Medical Record, Nov. 9th.)

PHYSIOLOGICAL ACTION OF PILOCARPINE.—At the clinic of Constantine Paul, experiments were made with pilocarpine, and the following results were reached:—(1) Subcutaneous injections of one-third of a grain and over have the same physiological action as the use of jaborandi. (2) In smaller doses, pilocarpine produces only diaphoresis, and in some cases checks diarrhea. (3) If a dose of one-third of a grain is given, salivation follows, and perspiration appears from the injection of only $\frac{1}{3}$ of a grain. (*Memorabilien*, Oct. 23, 1878.)

PRURITUS VULVÆ TREATED WITH SULPHUROUS ACID.—Dr. E. B. Stevens, *Obstetric Gazette*, October, says:

I was recently consulted by a lady complaining as follows: Severe pruritus of the labial surfaces, extending to the external genitals, with an erysipelatous rash covering these surfaces, and at the same time an abundant leucorrheal discharge. She had applied a variety of lotions to the itching, burning parts, without avail:—the leucorrhea had been of sometime standing; general health good; supposes herself approaching the menopause; age forty-six years.

Upon examination found an erysipelatous rash covering the labia and flaming up over the pubic region towards the lower surface of the abdomen; it was angry-looking and eczematous, with a watery exudation; on introducing the speculum found the rash occupying the labial surfaces and extending up over the outlet of the vagina. The superior portion of the vagina, and cervix of the uterus were perfectly healthy in appearance, whereas I had expected to find abrasion of the os, or some condition of chronic inflammation, as the reason for the leucorrheal discharge. Instead I found the red point of a small mucous polypus, about the size of a large pea, showing itself at the os. I had no difficulty in grasping the pedicle of this small polypus with slender forceps and snipping it off with curved scissors. I supposed this polypus was the irritant that produced the leucorrhea, and, as I expected, its removal almost entirely arrested the discharge.

For the pruritus and burning, I directed the parts to be freely bathed with sulphurous acid in full strength. The result was a prompt and entire relief. Subsequently there was a partial return for several times of the rash and pruritus, but always completely and promptly relieved as at first by the free application of the sulphurous acid.

My attention was called to the efficacy of sulphurous acid in kindred cutaneous troubles, by a paper read a year ago to the American Dermatological Association by Dr. L. D. Bulkley, of New York. He regards the group of cases described in that paper, as not only eczematous, but as having a para-

sitic origin, which he found to be uniformly corrected by the application of this acid.

Shortly before the present case came into my care, a lady applied to me with eczema of the face and neck, that under the care of one of my most intelligent medical friends, had resisted all reasonable treatment, constitutional and local, for many months. Dr. Bulkley's cases being fresh in my mind, I laid aside all constitutional remedies, and directed the parts to be freely bathed with sulphurous acid, full strength, with the effect to afford perfect, and as Bulkley expresses it, "exquisite relief." The acid was reapplied from time to time as the itching recurred and the cure is now complete, the skin having lost its scaly condition and become as smooth as an infant's.

Some writers direct the application of sulphurous acid variously diluted, as with water or glycerine. My experience, in a few cases only, agrees with that of Dr. Bulkley, that there is no necessity to dilute the acid, even for very delicate surfaces; I therefore direct the acid to be kept closely stopped in bulk, and the patient to have an ounce ground-glass-stopper vial, which is kept supplied from the larger bottle for use; due care being observed to avoid, as far as possible, atmospheric influence upon the acid. I advise the parts affected to be well saturated whenever the itching calls attention to the disease.

Pruritus vulvæ is frequently an obstinate affection, but I have hitherto found cases which were evidently eczematous; and my experience in the foregoing case is given simply as affording an additional rational therapeutic remedy, especially when the pruritus is associated with this condition of parts.

Notes and Queries.

HISTORY OF AND NECESSITY FOR MEDICAL LEGISLATION IN INDIANA.—Twelve or fourteen years ago, Dr. Lomax, of Marion, Grant county, Ind., engineered the introduction of a bill in the legislature for the registration of births, marriages and deaths. It failed to pass. A few abortive attempts were made since, to have a law for the protection of physicians in their practice. Knowing the character of these bills, we are not sorry that they failed; for, however much we may admire the code and believe in it, still any one who is found qualified by education, etc., should be permitted to practice as he honestly thinks is right.

Since those attempts nothing was, to our knowledge, done for medical legislation until at the session of the State Medical Society of 1873, when, on the motion of the writer, a committee on State Board of Health was formed. Said committee drafted a bill for the establishment of a State Board of Health, and introduced the same in the legislature at its session in 1874-5. This failed to pass. The committee introduced a similar bill at the next session. It passed in the Senate, and after certain amendments passed the House, but the Senate failed for some reason to concur in the bill so amended. In 1874-5 a bill was introduced into the legislature for the purpose of securing an "anatomy law." This was drafted by Dr. Parvin,* of Indianapolis, similar to the one which had just become a law in Illinois. It failed to pass. These, we believe, are the attempts made for medical legisla-

*I believe Dr. Stevens is mistaken in this statement; for although using every effort for the passing of a bill legalizing dissections, I did not prepare the one that was acted upon by the legislature.—T. P.

tion in Indiana, unless there were some earlier efforts that we have forgotten.

The writer, being chairman of the committee on "State Board of Health," at the time of formation, first called the attention of the profession to the necessities of the subject in an article to the State Society in 1873; since which time the committee has in every way sought to unite the profession upon the subject, so far at least as to have their earnest attention called to it, in consequence of which would come efficient strength and sympathy. By circulars sent throughout the state, by resolutions introduced into the county societies, etc., the profession have had constant reminders, and they have responded cordially to the wishes of the committee.

One cause of the defeat of bills for the establishment of a State Board of Health, has been the counter-efforts of our brethren, whom many are pleased to distinguish by the term "Irregulars." Such opposition was caused, not by any inherent dislike to the object contemplated in the bill, but by the fear that it was intended as the first step toward some law for the regulation of the practice of medicine, detrimental to a large body of practitioners; perhaps by giving said law the power not only to inquire into the cause and proper modes of *prevention* of diseases, etc., but to regulate the *practice*—two things which should always be kept separate, and this last idea is the one upon which the committee has been acting since last year.

The Illinois law is, perhaps, better than nothing—so far, we mean, as a union of the Board of Health and Examiners; and yet we doubt not, after a trial, it will be found wanting. In accordance with the idea of such separate boards, and to show all physicians, of every class and sect, that we were honest in our meaning, and "desired the death of no one," the following action was taken at the Indiana State Medical Society in May last, as the annexed extract will show:*

"Dr. Stevens said: I think, in conformity with the drift of thought suggested in the address of the President, we should, at this meeting,

* See Transactions of Indiana State Medical Society for 1878.

lay some plan for definite action; I will, therefore, read some resolutions which I have prepared, which are as follows:

"*Resolved*, That the committee upon 'State Board of Health,' as now constituted by this society, shall be called the 'State Health Commission,' with power to associate with them a competent Civil Engineer, etc.; and that the State Geologist shall be an *ex officio* member of said commission. That the duties of such commission shall be to make investigations as to the causes and means of preventing disease in the State; and that they may, at any time they see fit, petition the Legislature to confer upon them *police powers*, so that they can enforce such measures as they may deem necessary to the objects above mentioned.

"*Resolved*, That in cases of vacancies occurring in such Board of Commissioners, they shall be filled by the State Society.

"*Resolved*, That a committee of three be appointed by the President to draft a bill for the regulation of the practice of medicine in Indiana, and also to define the duties and privileges of pharmacutists and druggists within the State; and such bill shall be upon the basis of equal recognition of all schools and sects in medicine,—so far as the examination of candidates for practice and their privileges are concerned, they are to have separate boards.

"*Resolved*, That the President appoint three physicians from each county in the State, to use their influence with the Legislature in having any medical bill passed that has received the sanction of, or been recommended by, the State Society."

A bill has already been drafted upon the subject of "Regulation of the Practice of Medicine," similar in kind to that adopted by Illinois, which has received the sanction of many respectable members of the so-called "regulars" and "irregulars." In accordance with this, an Examining Board is to be formed by each sect or school of physicians; and all candidates for practice will be examined and passed upon, as regards qualification, etc., by such boards, each sect or school to examine its own applicants.

This bill, we trust, will remove the troubles we have had to contend with heretofore, arising, as we have mentioned, from the fears and suspicions of different schools of medicine, and leave the Health Commission to act untrammelled, and enable them to obtain the police powers they so much need.

The members of the "Health Commission," as formed by the State Society, are as follows: Thad. M. Stevens, M. D.,

chairman; Wilson Hobbs, M. D.; George W. Burton, M. D.; J. W. Hervey, M. D.; Professor E. T. Cox, State Geologist. A civil engineer, etc., will be added.*

By the time the legislature meets, we trust the commission will present ample proof of its labor, but all must work in harmony or much strength will be lost. We trust that our medical brethren of all schools will aid us to push not only the bill to "regulate the practice," but to have proper police powers conferred upon the Health Commission.

If any are disposed to object to the fact that the medical portion of the commission are all "regular," they should remember two things:

First. That this commission can not, in any possible way, interfere with the rights or privileges of any medical man whatever, so far as practice is concerned, there being other boards to regulate any such question.

Second. Something is due to that portion of the profession, who, during the last few years, have not only made the State Board of Health their especial study, but also made it possible to have it favorably considered by the legislature.

We know that the mass of the profession of any school are generous enough to recognize such a claim, if only their attention is called to it.

A registry law should be passed in connection, or at least at the same time, with the "Health Law." It is very doubtful if any benefit will arise from the reports that some city authorities require at the hands of the physicians in case of the death of patients. This is, perhaps, of some local interest, but can not be of general utility, for it furnishes no basis upon which to form general conclusions, in which fact is found the good of such reports. There has been no provision made in the state for the registration of births and marriages. It is

* Since the above was written, the "Commission" organized as follows:

Wilson Hobbs, M. D., Knightstown, President; Thad. M. Stevens, M. D., Indianapolis, Secretary and Executive Officer; Geo. W. Burton, M. D., Mitchell, Treasurer. Other members—J. W. Hervey, M. D., Indianapolis; Prof. Lemuel Moss, Bloomington; Prof. John L. Campbell, Crawfordsville; Prof. E. T. Cox, State Geologist, *ex officio* member.

better that it is so than to have partial, and therefore inoperative ones, such as those referring to deaths. There should be a general law regulating those three points. What laws we may be able at any time to have enacted should, in our opinion, not be based upon the principle that a "poor one is better than none;" for once have it fastened upon the citizens, the cry will be, "the profession has accepted it, and so let it remain." The profession, as guardians of this whole subject, should be satisfied with a law, or have none at all.

THAD. M. STEVENS, M. D., Indianapolis,
Oct. 22, 1878. Chairman of Health Commission.

OUR PROFESSION.—We select these encouraging words from the Address to Students, *Lancet*, September 14, 1878:—"Dr. Johnson, who had a very high idea of the varied learning and science necessarily connected with the character of an accomplished physician, often affirmed that the physicians of this island 'did more good to mankind without a prospect of reward, than any other profession of men whatever.' Pope has said, 'they are in general the most amiable companions, and the best friends, as well as the most learned men I know.' It is the duty of each and all of us to preserve and transmit unsullied this lofty character, and, in the words of old Guy of Chauliac, to be 'kind to patients, gracious toward colleagues, modest in giving an opinion, chaste, sober, pitiful and merciful, and not greedy of gain.'"

QUALIFICATIONS FOR THE PRACTICE OF MEDICINE.—In the twelfth century, the requirements necessary for the practice of medicine were more rigid than in almost any country to-day, as the following excerpt from the Address to Students, in the *Lancet*, shows:—"No student in medicine could practice in the kingdom of Naples, until he had been examined by the medical college of Salerno. If his attainments were judged satisfactory he had the title of 'master' (*magister*) conferred upon him, and this title the royal authorities confirmed when he exhibited his diploma. Before being admitted to exami-

nation, the candidate had to prove that he was a legitimate child, was twenty-one years of age, and had devoted seven years to the art. He was also publicly examined in the writings of Galen, Avicenna and Hippocrates, and sometimes in those of Aristotle. A still later law decreed that, preparatory to the study of medicine, three years at least should be given to the study of logic, and after that five years were to be devoted to medicine and surgery."

REMEDY FOR EPILEPSY.—Dr. John E. West, of St. Clairsville, Ohio, has sent us the following:

Dr. Parvin: I send you a remedy for epilepsy, two hundred years old, copied from "the Royal Pharmacopœa, Galvanical and Chymical; by Moses Charas, the King's Chief Operator in his Royal Garden of Plants. London: printed for John Starkey, at the Miter, within Temple Bar, and Moses Pitt, at the Angel, in St. Paul's Church-Yard; 1678."

"*A Famous Anti-Epileptic Powder.*—Take the secondines of a woman of sanguine complexion, brought to bed of her first child, being a boy, dry'd and cleans'd from the membranes, an ounce; roots of white piony, and seed of the same, of each half an ounce; shavings of a man's skull, put to a violent death, shavings of an unicorn's horn, hoof of an elk, misseleto of the oak, roots of wild valerean and swallow wort, of each three drams; pearls and coral prepared, contrayerba stone, white amber and seed of goat's rhue, each two drams; oriental murk and ambergrise, of each one scruple; mingle them and make a powder for use."

ERRATUM.—In Dr. Kemper's article in the October number, page 219, the prescription should contain two and a half drachms instead of two and a half ounces of water.

PRACTICE FOR SALE.—A physician in a successful village and country practice for many years, desires to sell to a competent successor. Letters of inquiry may be addressed to the American Practitioner.